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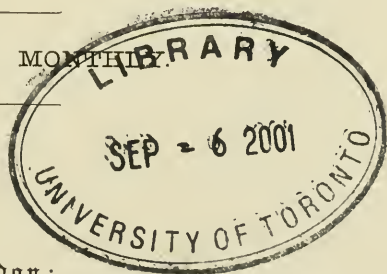
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THE JOURNAL OF LARYNGOLOGY, RHINOLOGY, AND OTOTOLOGY.

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SCHOOL BOARDS AND DIPHTHERIA.

By R. NORRIS WOLFENDEN, M.D. (Cantab.).

THE report just presented to the School Board of London by its medical officer "on the prevalence of diphtheria in London and elsewhere, and its alleged connection with the elementary schools,"¹ formulates conclusions which are so opposed to current opinion that it merits close attention. The chief interest of the report centres round the question whether the aggregation of children in schools is or is not an important factor in the incidence and spread of the disease. Dr. Smith's conclusions are somewhat startling, viz., "that school influence, as such, plays but an unimportant part in the enormous increase of the disease during recent years in London"; and this he supports by the results of special inquiry into 2168 consecutive cases, a very small number of which, according to him, "could be traced to even a possibility of school infection."

The author claims the system of inquiry he adopted—viz., requiring the nurse removing the case to fill up a form, and the head teacher of the school, where the child was of school age, to do the same, along with inquiries from the parents of the children, and personal visits during the school holidays—to be accurate; and also that the number of cases inquired into (2168), being unprecedentedly large, excluded any source of error, the cases (having arisen both during school and holiday periods) being also typically representative. If the author's assumption as to the extreme accuracy of this method of investigation may be open to criticism, his conclusions undoubtedly are still more so. He finds that the disease is equally incident in children attending upon schools and in those not attending; and that as the cases of school age attributable to school

¹ Report to the School Board of London, April, 1896. By Dr. W. R. Smith. Published by Straker & Sons, London.

infection form only 7·6 per cent. of the cases, while 15·4 per cent. can be traced to other causes, school influence is but a small factor in the spread of the disease. According to his figures, only 124 cases out of the whole—*i.e.*, 5·7 per cent.—may fairly be attributable to school influence. The author's inquiry embraces the periods from April 1st to September 30th, 1895. It will, perhaps, be interesting to give an abstract of the author's report in as much detail as we can allow. First, dealing with statistics from 1855-1895, he shows that the mortality from diphtheria in England and Wales has steadily increased since 1881, but this has been most marked in the London area. This enormous increase is well shown in the table giving the mortality per million for the decades :—

	England and Wales.		London.
1861-70	185	.....	176
1871-80	121	.....	122
1881-90	163	.....	260
1891-95	252	.....	543

He then refers to Mr. Shirley Murphy's report to the London County Council of March 8th, 1894, and his address to the Epidemiological Society in November, 1894, in which he suggests that further investigation into the question of school influence is required ; and to Mr. Murphy's deductions that the increase of mortality at ages from 3 to 10 first became conspicuous in 1871, after the passing of the Elementary Education Act, and this marked increase in populous districts as compared with rural districts since 1871 may be due to the greater effect of the Education Act in the former. He incidentally mentions Dr. Low's, Dr. Wheaton's, Dr. Sweeting's, and Dr. Sykes's reports upon outbreaks.

He next discusses the general evidence from mortality of diphtheria in England and Wales, and deduces from his statistics that, while for the whole country diphtheria mortality has been high in recent years, it is not so high as it was a generation ago. The first School Board decade, 1871-80, was followed by a decreased mortality, shared by nearly the whole country. The increase of mortality of periods 1881-90 and 1891-95 was very considerably greater in the southern than northern parts of the country. Surrey, Sussex, Kent, and Essex have been the most prominent.

Since 1861 up to 1880 London has been increasingly encircled by a ring of diphtheria counties, and in the two periods following mortality in London increased enormously. The southern counties have suffered most since 1881 ; the midland and northern counties (except Leicester, Lancashire, and Durham) suffered theirs before 1871. The southern area includes agricultural counties which cannot be constantly infected direct from London. And the northern area of low diphtheritic rates since 1871 comprises dense populations, in which all the influences of mere aggregation in the spread of the disease are likely to be as active as in London, and far more active than in agricultural districts (Bucks, Wilts, Oxon, Suffolk), whose rates now exceed those of any of the four periods in Lancashire.

In Essex, Dr. Thresh's reports show that there has been a marked increase of mortality from diphtheria in rural as well as urban districts, and, if school influence is a factor, Dr. Smith asks why should Ongar, a

purely rural district, have greatly increased incidence, while Colchester has only slight increase?

The author proceeds to compare diphtheria and measles, emphasizing what is known, that the two behave very differently—those counties and districts which suffer most from scarlet fever and measles not being most favourable to the diffusion of diphtheria.

After having "shown that the theory of school influence is inadequate to explain the incidence of diphtheria through the country in the last quarter of a century," the author proceeds to consider in detail the case of London.

He criticises Mr. Shirley Murphy's proposition that at ages three to ten diphtheria mortality was maintained in the decennium 1871-80, being most notable in London, and suggesting a fresh factor as regards diphtheria at ages three to ten becoming operative in the decennium 1871-80 (*i.e.*, School Boards). Dr. Smith objects to taking age three as that at which school attendance begins, and prefers age four. During the recrudescence of the disease in 1881-90 children aged two to three were most affected by the rise, while in London the incidence fell a year earlier, the increase was much less at age four (at which school life practically begins), and was still less after five, when attendance is compulsory. Apparently a fresh factor in 1881-90 affected children under school age more than those who were exposed to all the risks of school infection. Dr. Smith says that the age period five to ten may be taken as representing school age, and any explanation of the incidence of diphtheria in London must deal with the fact that at this age girls are one-third more liable to die of diphtheria than boys. The extra source of infection is to be found outside the schools, *viz.*, less open air than boys and the habit of kissing.

Dr. Smith asserts that stronger evidence than his statistics could hardly be adduced that age susceptibility is the main factor in the selection of diphtheria victims, and that "school aggregation acts only as a slightly disturbing element." A child becomes more liable to diphtheria year by year as it approaches school age, and less liable to it year by year after it has reached school age. We cannot quote these statistics *in extenso*, but their compiler concludes from them that it is impossible to resist the conclusion that no special increase of liability to diphtheria can be traced to the beginning of school attendance. The ages now most subject to the disease would still be the same if aggregation in schools were abolished, and the steady liability up to four and diminution commencing at four to five would continue.

Table XXV. is intended to show that the period of greatest mortality to diphtheria begins *before* the real school age has begun, and those districts in which the special liability commences at one or two years of age show that the conditions of home life "are a much more potent factor in the spread of the disease than aggregation in schools." Dr. Smith deals with the contention that holiday periods have occurred simultaneously with a decrease in the notifications, indicating that school influence is a main factor in determining the spread of the disease.

So far as the figures in Table XXVII. go—

Notifications at each Age for the Four Weeks before, during, and after the Holidays in August, 1895.

0	1	2	3	4	5	6	7	8	9	10	11	12	13—15	15 and upwards.
33	66	82	116	119	103	81	65	54	48	34	29	30	48	228
18	59	59	74	71	57	62	39	30	32	31	19	13	35	201
25	56	73	114	100	86	92	71	46	39	44	23	24	40	233

they not only lend no support to Dr. Smith's contention, but rather prove the very opposite, viz., that there is a distinct decrease in the number of notifications during the holiday period, and a very marked increase in the notifications before and after the reassembling of the schools. The figures taken from provincial towns are, as Dr. Smith remarks, too small to enable too many conclusions to be drawn from them. There is some force in his contention that a decrease in the notifications during school holidays may be largely due to many children being removed into the country, leaving fewer susceptible people in London.

While admiring the industry of the author, as evidenced by this report, and the enterprise of the School Board in forwarding the inquiry, we can only remark that Dr. Smith has not advanced the question much further. The question of the influence of schools and aggregation of children in the spread of this disease is but little nearer solution than it was before, and must still remain an open one. Some of Dr. Smith's facts and figures do not always seem to us to bear the inferences he has drawn from them, and we feel convinced that this report will do but little towards removing the general impression that aggregation of children in schools leads to the spread of diphtheria, though we willingly admit that he has made out as good a case as is possible from a partial inquiry, for the School Board. But it leaves the question much as it was before, and a good many factors must be taken into consideration before we can agree with such sweeping conclusions. While many of these conclusions are open to adverse criticism, we can more cordially agree with Dr. Smith in his recommendations that all children with sore throat should be excluded from school, and intimation be given to the Medical Officer of Health; and that means of bacteriological examination should be placed at the disposal of the sanitary officials, and notification of cases within twelve hours be given to the head teacher, to ensure the removal of children from infected houses.

Turning now to the report of Dr. Shirley Murphy,¹ we find the following remarks upon "Diphtheria and Elementary Schools":—"In my last report I discussed the relation of school attendance to an increased incidence of death from diphtheria in the school-age period of life since the Elementary Education Act came into force, and I stated my reasons for thinking that the aggregation of children in schools played an important part in the dissemination of diphtheria in London. It may be recollected that the notification statistics of the year 1893 showed that when school operations were suspended by the summer holidays there was a notable diminution in the prevalence of diphtheria at

¹ "Annual Report of the Medical Officer of Health of the Administrative County of London." 1894. London: Stanford. May, 1896.

“all ages,’ and especially among children at the school-age period of life, and that a marked increase followed the reassembling of children at the conclusion of the holidays. With a view to learning whether the experience of 1894 affords similar evidence the cases of diphtheria in that year have been cast into weeks, and grouped into three periods of four weeks, corresponding with the four weeks immediately before the effect of the summer holidays would be manifested, the four weeks during which this effect would be manifested, and the four subsequent weeks.”

	Notified Cases.			Increase or Decrease per cent.		
	0—3	3—13	13 and upwards.	0—3	3—13	13 and upwards.
The four weeks preceding effect of holiday	136	476	195	—	—	—
The four weeks during which the effect of the holiday would be manifested.....	151	362	203	+ 11'0	— 23'9	+ 4'1
The four subsequent weeks	135	523	225	— 10'6	+ 44'5	+ 10'8

The number of attacks among children under three years of age was decreased in the third period of four weeks, and the August depression in the curve showing attacks in children at this age occurs somewhat later than the depression in the curve showing attacks in children from three to thirteen, suggesting that the attacks in children at the earlier age are due to infection from children of older age, and that the diminution in attacks in the former was due to diminished opportunities of infection from the latter. This was also the case in 1893, and the year 1894 “teaches the same lesson as the preceding year, so that the attention of medical officers of health and of school authorities should be especially directed to a study of the conditions required to lessen as far as possible the opportunity which school attendance affords for the communication of this disease from one child to another.”

Speaking at a meeting of the Epidemiological Society on May 15th, Dr. Shirley Murphy reiterated his opinion that aggregation of children in schools was the greatest factor in the spread of diphtheria.

We feel strongly that the opinions advanced by this authority are more in accord with general experience than the deductions of Dr. Smith, whose investigations appear to us to be far from complete and to have added very little to the elucidation of a very complicated question. The subject is one of vast importance, concerning, as it does, the multitudes of children under the control of the School Board, as well as in its general bearing upon the question of the etiology of this disease.

Dr. Smith's endeavour to whitewash the School Board of London in this particular matter appears to us to be too much of the nature of making out the best possible case for his employers; and while giving every credit to an investigation which must have entailed both labour and expense, we are not prepared to acquit the School Board on this evidence of serious defects, both as to the spread of diphtheria in the metropolis and as to other matters into which it is not necessary to enter here.

SOCIETIES' MEETINGS.

TRANSACTIONS OF THE AMERICAN LARYNGOLOGICAL ASSOCIATION.

Eighteenth Annual Congress, held at Pittsburgh, Pa., May 14th to 16th, 1896.

President, Dr. WILLIAM H. DALY (Pittsburgh).

Special Report for the JOURNAL OF LARYNGOLOGY. By JAMES E. NEWCOMB, M.D. (New York), Fellow of the Association.

First Day, May 14th.—Morning Session.

PRESIDENT'S ADDRESS (*Abstract*).

Gentlemen and Fellows of the Association,—The replete programme now before us, comprising as it does thirty-four scientific papers, not including the theses of the candidates for membership, assures us that it is quite possible for us to have for our organization a congress of the first class in a city of the second class. The programme has never been equalled in the history of our illustrious society.

I am scarcely old enough to indulge in much looking backward, but I cannot refrain from doing so just a little, and with much pardonable pride, when contemplating the value our specialty has been and still is to the general practice of medicine and surgery, as also the value of our literature to that of the general science of medicine and art of surgery, and the eagerness with which the latter is sought after and studied by the profession.

There is to me the highest sense of pleasure in knowing the respect which laryngology now receives from medical men, as well as from the laity, and that our teachings have stood the crucial test of time and of practical experience, and have proved so great an aid to general medical science and practice.

There are so many robust men and women in this city to-day of whom I had the professional charge in former years as puny, chicken-breasted specimens of childhood, with nasal obstructions, adenoid growths, and chronic tonsillitis, that I have thought it not amiss to advert to the real and permanent benefits derived from treatment for their removal, the results in every instance of which are so worthy of our best admiration.

I was accosted a few days ago by a stalwart young man, who smilingly told me that he was one who was placed under my care twenty years ago, as a delicate boy, who weighed but sixty pounds when fourteen years old. He told me that he had nearly doubled his weight in the two years succeeding his treatment, which consisted of the clearing out, and curing of

the adenoids in his upper pharynx and the curing of a chronic tonsillitis. He is now a leading amateur athlete.

The debt that general medicine and surgical science and art owe to laryngology and rhinology, then, is so apparent and real that we may be pardoned for our expression of honest pride for the part this learned and pioneer society has taken to place and maintain it on the high plane it now occupies. Let us, then, go forward in the right direction, and especially endeavour to further reveal the obscurities that still surround ethmoid and sphenoid disease.

Before closing let me voice a sentiment that all of us so earnestly feel, and that is—all honour to Manuel Garcia, one of the fathers of the laryngoscope and of laryngology. Many of us sat with him last August in London around the banquet table of the laryngological section of the British Medical Association, and observed with pleasure how lightly and blithely his ninety odd years sat upon his silvered head, "frosty but kindly." And now, with bowed heads and sorrowing hearts, we also feel all honour to the name of dear Dr. Wilhelm Meyer, of Copenhagen, whose death, after ripe years, full of honours and loving regard by his profession, we justly mourn. Shall we ever forget his fatherly wisdom and kindness to us? Now that all Christendom is uniting to erect a monument to his memory, let us at this meeting, one and all, give with a liberal hand, thus showing in a practical way what everyone has so honestly felt in his heart.

Now, dear friends and Fellows, I bid you a hearty welcome to our city, and declare this Congress open.

The Etiology of Deviations, Spurs, and Ridges of the Nasal Septum.
JOHN O. ROE, M.D. (Rochester, N.Y.).

Deflections of the nasal septum are ascribed to a variety of causes. These may be divided into predisposing and exciting causes.

The two main predisposing causes are diathesis and racial characteristics. The principal diathetic influences are strumous, syphilitic, tubercular, and rachitic diatheses. The influence of racial characteristics is shown by the greater prevalence of deviated septa among civilized than among savage races, and in the aquiline type of nose.

The exciting causes of septal deflections may be internal or external. Internal exciting causes: (a) defective development; (b) diseases of the septum; (c) diseases of other portions of the nose.

In discussing defective development the author pointed out the fact that the frequency of the deflections from this cause was due to the fact that in early life the vomer is composed of two laminæ, which are separated by a plate of fibro-cartilage, which is prolonged forward to form the cartilaginous portion of the septum. Ossification begins in each plate about the sixth or eighth week of fetal life, but is not complete until after puberty. The coalescence of the laminæ takes place from behind forward, beginning about the third year. Bearing in mind this fact that the vomer is composed of two parallel laminæ which do not fully coalesce until after puberty, and in some cases do not coalesce at all, we can readily see the effect that would be occasioned by the slightest imperfect development of either of these plates. Hypernutrition on one

side, or lack of development on the other, would cause the septum to be pushed out of its normal line of growth, and deflections in the vomer would naturally result and would be accentuated in the cartilaginous portion of the septum.

The fact that the laminae of the vomer coalesce from behind forward explains why it is that the posterior end of the septum is rarely observed to be deflected, while the middle and anterior portions are so frequently deviated.

The different forms which deflections, spurs, and ridges of the septum may assume is in this manner readily explained. This unequal development may take place in a vertical direction or in a horizontal direction. Thus, if we have a vertical overgrowth of the septum on one side or a defective growth of the septum on the other, we may have simple deflection of the septum toward the side of the greater development. Again, if we have an overgrowth of one plate in an antero-posterior direction and in another plate in a vertical direction, we may have the peculiar conformation of the septum called sigmoid deflection.

This unequal growth of the two plates composing the septum may be influenced by diseases of the septum itself. The redundant tissue resulting from hypernutrition of either side in excess of the other causes a vertical as well as a horizontal overgrowth, and as the septum lies between fixed limits an increase in that direction must result in its being bent to one side or the other, and spurs, ridges, and other excrescences of the septum are frequently caused thereby.

Associated with diseases of other portions of the nose we frequently have malformation of the superior maxilla, small and highly arched hard palate, and enlargement of one or more of the turbinated bodies on the concave side of the nose. The latter, however, is unquestionably more frequently the result of the deviation than the cause. Obstruction of the anterior portion of one of the nasal passages may cause deviation of the septum to that side by the continued rarefaction of the air in that nostril.

Of the external exciting causes the main one is traumatism, causing enchondromata, overgrowths, and dislocation of the triangular cartilage, thereby causing deflection of the septum as well as obstruction of one or both nostrils. Various other minor conditions to which deflections of the septum are ascribed by different authors were referred to, such as the habit of inserting the finger into one nostril to remove scabs and crusts, and habitually blowing the nose with the same hand.

Of the different causes that may produce deflection of the septum, the unequal development of the two separate plates of bone composing the vomer in childhood and early youth described by the author, and the influence of malnutrition in the causation of this unequal development, was regarded by the author as the most frequent and important condition in the production of ridges, spurs, and deflections of the nasal septum.

The Operation for Deviation of the Nasal Septum. DR. ARTHUR W. WATSON (Philadelphia).

Many of the usual operative measures are unsatisfactory because they overlook the fact that a deviated septum is longer than a straight one,

and make no provision for a reduction in the amount of tissue present. We must first reduce the septum to a size which will fit into a straight line between the points of attachment of that part of the nose. This is done by the removal of a portion of tissue in the general line of deviation. If the latter is horizontal we must excise an elliptical portion gradually convergent at both ends; if vertical, a wedge-shaped piece must be removed, its apex being above and its base lying near that of the septum, where, if necessary, it may be joined by a horizontal incision. The excised portion should always include the protruding angle, and the amount of tissue to be removed can be estimated by the eye. Care must be taken to avoid cutting the mucous membrane of the sound side opposite the incision, as it helps to hold the edges in line, thus facilitating union and avoiding perforation. Incision must be made on the convex side of the septum. To bring the portion operated upon into line, some variety of crushing forceps may be necessary.

Of no less importance is the second step of the operation, namely, the retention of the septum in position. This is often neglected, and bad results ensue. Healing of the cartilage requires from three to four weeks. The best support is furnished by a flat ring-head pin, the latter being encased in rubber tubing. The pin should enter from the concave side of the septum, just back of its anterior edge and passed diagonally through to its other side, then across the vertical incision, if there is one, and then back again into the septum, until the head of the pin lies on the latter within the nostril. We must avoid deflection in the opposite direction. In this way both nares are left free for breathing and for cleansing. Padding of the pinhead with the rubber prevents ulceration, and the pin may be worn even for three weeks without any discomfort.

Should additional support be required for a deviated bony septum, we may insert a pad of iodoform gauze between the septum and outer nasal wall at the point of deviation, but the bony parts heal more quickly than the cartilaginous, and the gauze may be removed, therefore, in from seven to ten days, the pin being still left *in situ*.

Requisites also for success are suitable illumination and freedom of the parts from blood. Cocaine anæsthesia is preferable to ether.

Discussion was opened by Dr. E. FLETCHER INGALS of Chicago. He thought that nutritive changes were by far the most frequent exciting cause. Trauma was greatly over-estimated. Indian children are as rough in their sports as white children, and must be frequently hit on the nose, yet they did not suffer from nasal catarrh.

Dr. MORRIS J. ASCH (New York) would agree with Dr. Ingals as to the rarity of trauma as an exciting cause. It did not operate in more than one out of fifty cases. He referred to his own operation for straightening, which he had presented to the Association in 1889. It might sometimes leave the nose a little rough inside, but it was freely pervious to air.

Dr. S. O. VAN DER POEL (New York) thought a *sine qua non* in all these operations was the thorough overcoming of resiliency. He had been accustomed to pass a pin through the deflected point, but its pressure had caused pain and even ulceration at the juncture of the two incisions, sometimes even producing perforation. Later he had tried

breaking up the parts with Adams forceps, but even then the bad effects of pressure were the same as before.

Dr. CARL LEILER (Philadelphia) regarded the Asch operation as a revival of the one brought forward by Glasgow some years before, and afterwards advocated by Sajous in a modified form. The essential feature was the use of a stellate punch. A pin placed at the bottom of the septum obviates pressure in the latter. The pin should be introduced through the outside of the nose just below the notch in the nasal bones, thrust down to the cleft between the palatal processes of the superior maxillæ and its point firmly driven in there. It should not be cut off flush with the skin on the outside, but a sufficient length should be left to prevent a burial in the swelling of the soft tissues. After the latter had subsided a portion of the projecting pin could then be cut off.

Dr. J. E. H. NICHOLS (New York) laid stress upon the necessity of breaking up all resiliency. The Asch operation was good for cartilaginous operations. When the bony septum was involved he was accustomed to make a compound fracture thereof and apply a broad cork splint. He did not believe in the use of pins unless all resiliency was destroyed.

Dr. D. BRYSON DELAVAN (New York) had discarded pins several years ago. Whether the idea of the Asch operation is entirely new or not, Dr. Asch had elaborated a practical technique, and for this we all ought to be grateful. As to etiology, he could not admit that trauma acted in all cases. Mouth breathing from any cause, and especially from adenoids, will produce lack of nasal development and consequent septal deviation.

Dr. W. E. CASSELBERRY (Chicago) expressed a strong belief in heredity as a factor in deviation. No one operation would suffice for all cases. Account must be taken of the age of the patient and of the anæsthetic to be used. Deviations were generally cartilaginous, with more or less encroachment upon the bony septum. As retaining measures he had been accustomed to use gauze and tubular splints.

Dr. JOHN N. MACKENZIE said he rose to do a dead man historical justice, for the essential features of the customary septal operations had been long ago suggested by the late Dr. James Bolton, of Bridgetown, Virginia. The speaker was accustomed to employ a vulcanite shell in the nostril operated on as a retaining splint.

Dr. W. K. SIMPSON (New York) had been impressed with the success of the Asch operation. He considered it bad surgery in these cases to plug the nose with gauze after operation. The Asch tubes would cause the hæmorrhage to cease as soon as they were placed in position.

Dr. C. M. SHIELDS (Richmond, Virginia) was accustomed to saw off the thickened portion (in deflection with thickening) before straightening the septum.

Dr. G. A. LELAND advocated breaking off all the exostoses which seemed to run into the inner maxillary ridge. He used cotton, with a two per cent. creoline solution, to plug the nares.

Some Reflections on Atrophic Rhinitis. W. P. PORCHER, M.D. (Charleston, South Carolina).

The author referred to the various current theories regarding the nature of this trouble. He would regard it, not as a disease *per se*, but as a result of other inflammations which have ended in a purulent discharge, leading to a washing away of the epithelia and the destruction of the mucous membrane.

He related the history of a woman, aged thirty-four years, of good antecedents. Scab formation came on after measles fifteen years previously. The inferior and middle turbinates were gone on the left side and injured on the right. Stimulating applications and the iodide (given simply with the hope of increasing secretion) did no good. Thinking that perhaps the antrum was at fault, this was opened and irrigated, but without avail. Finally, cotton tampons, dipped in a solution of iodine and iodide in glycerine, had caused almost a hypersecretion. Crusts still formed to some extent, but they were discharged more freely.

Dr. LEILER had found the Gottstein cotton tampon the only efficient measure in these cases. It needed no medication, for it would quickly imbibe moisture from the nostrils, and would strain and moisten the inspired air. Of late he had tried aseptic wool for the same purpose, but had discarded it in favour of the cotton. He employed nasal washings twice daily.

Dr. THOMAS HUBBARD (Toledo) was accustomed to use an alcoholic solution in the same way. The cotton tampons moistened therewith should be wrapped around the turbinated bones.

Dr. C. C. RICE (New York) would wash and oil the nostrils, using any one of the numerous oily preparations now at our disposal. Overstimulation was to be avoided.

Dr. LELAND employed antiseptics and stimulants. For the latter he used cocaine in ten per cent. solution for its secondary effect—that is, of congestion. The addition of resorcin to the solution of cocaine would prevent the poisonous effects of the latter.

Dr. A. W. DE ROALDES (New Orleans) had used with success electrolysis with cotton-wrapped electrodes.

Dr. RUE preferred mild silver nitrate solutions with mild galvanism. It was necessary to look after the accessory cavities, as scabs did not come from the mucosa alone.

Dr. J. E. NICHOLS employed ortho-chloro-phenol in from ten per cent. up to full strength. It was a deodorant, disinfectant, and stimulant.

Dr. INGALS did not think it harmful to use, say, one to two grains weekly of cocaine in the nostrils in these cases. He had found value in weak strengths in powder or oils of yellow oxide of mercury.

Laryngeal and Post-Nasal Photography with the Aid of the Arc Light. (Lantern Demonstration.) THOMAS R. FRENCH, M.D. (Brooklyn).

The method of photographing the larynx which the writer described at the International Medical Congress held in Copenhagen in 1884, had a number of disadvantages, which has made the art a somewhat unsatisfactory one. The principal difficulty was with the source of illumination,

which was that of sunlight. The necessity for limiting the use of the method to a few hours on days in which the sun shone brightly, and the varying power of the sun's rays, with the consequent uncertainty of the success of the exposures, reduced the usefulness of the method to a considerable extent.

During the past few months he has succeeded in adapting the electric arc light to the method, so that good photographs can now be taken at any time, day or night. With sunlight as a power of illumination it was necessary to bring the subject to the light. With the new method we can bring the light to the subject. This, I feel sure, will greatly enhance the usefulness of laryngeal and post-nasal photography, and enable us to make studies of the interior of the larynx, the posterior nares, and the vault of the pharynx, in normal and pathological states, far better than has yet been done.

As the distance between the camera and the object to be photographed is very short, one of the greatest difficulties was to adjust the light to the sensitive plate so that a depth of focus would be obtained. To do this a small diaphragm, a rapid shutter, a very sensitive plate, and a powerful light must be used.

The necessary outfit for producing a sufficiently powerful light for the purpose consists of an automatic two thousand candle-power arc lamp, which is partly enclosed in a metal box. On the front face of the box is a condensing lens, which when placed nine inches from the arc gives a focal distance of twenty inches. This relation of light and lens, after repeated trials, was found to give the most satisfactory illumination for the purpose.

The lamp and accessories are fitted to a narrow board, which is placed on a table of sufficient height. The light can be raised or lowered by tilting the board forwards or backwards by means of a device designed for that purpose.

The rheostat, which is a necessary controller of the light, is placed on a shelf beneath the table top.

The manner of using the light in photographing the larynx or posterior nares is the same as I described in connection with the sunlight condenser in the "New York Med. Journal," December 13th, 1884.

The beam of light should be caught upon the forehead mirror several inches inside of the point of focus. Though good photographs can usually be obtained at the first sitting, two sittings are sometimes required. At the first the focus is found, and with it perhaps a good photograph. If, however, a good photograph is not secured at the first sitting, the focus and the amount of light needed being known, there is no difficulty in obtaining at the second sitting as many good photographs as desired. At the second sitting of one patient I made eighteen exposures and obtained fourteen good impressions. If the apparatus is in order, the time needed to secure a photograph of any larynx does not exceed that necessary for making a careful laryngoscopic examination.

The art of photographing the larynx may be somewhat difficult to acquire, but when once understood it is a perfectly simple procedure.

[Twenty photographs of the larynx and posterior nares were exhibited on the screen during the reading of this paper.]

Afternoon Session.

Presentation of Instruments—

By Dr. INGALS, of a portable air compression apparatus, in which the pump and spray tube could be packed in the cylinder itself.

Also of an improved nasal saw.

By Dr. SEILER, of a double screw hook, attached to a spiral, and covered with another spiral acting as a shield. Rotation of the latter exposed the hooks, which could be attached to any soft foreign body in the air passages or in the ears. The principle was merely that of the flexible shaft of a dental engine.

By Dr. ROE, an improved set of instruments for operation on the nasal septum.

By Dr. HUBBARD, of an improved nasal écraseur.

Recent Progress in the Treatment of Malignant Disease of the Larynx.
Dr. BRYSON DELAVAN, M.D. (New York).

Speaking in a general way, it must be admitted that surgical effort has shortened rather than lengthened the lives of patients suffering from laryngeal epithelioma. This statement is based upon the fact that the average duration of life in such cases without removal of the larynx has been a year and a half. But there are indications of a better showing for the future as concerns operative measures.

These may be divided into the following groups :—(1) Thyrotomy, with or without partial laryngectomy ; (2) complete laryngectomy by the Solis-Cohn method ; and (3) complete laryngectomy in cases of extensive laryngeal disease with glandular involvement.

Butlin has laid down with reference to thyrotomy the following propositions :—

1. Every malignant growth of intrinsic origin which can be dealt with should be treated by an operation in the absence of decided indications to the contrary, and operation should be done with the least possible delay.

2. Every laryngeal growth suspected to be malignant and of intrinsic origin, and apparently within easy reach of free removal, justifies an exploratory thyrotomy in a suitable patient in the absence of infiltration of surrounding structures, and of involvement of the lymphatic glands. For a thyrotomy we must have a good illumination, and swabbing with cocaine of the parts to be operated upon should be done, in order to contract the vessels and prevent parenchymatous hæmorrhage.

As to after-treatment, the tampon canula should be immediately removed from the trachea, the interior of the larynx dusted with iodoform and boric acid, and the patient placed on the bed with the operated side down, with one small pillar under the head. The wound is not plugged with gauze, but is kept open and dusted twice daily (preferably during an inspiration) with the mixture above named. The boric acid lessens the danger of iodoform poisoning. Rectal nutritive enema may be necessary for a while, but on the very day of operation the patient may

try to swallow a little sterilized water, and, if this succeeds, he may be at once placed upon a fluid diet. The upper part of the body should be bent well forward over the edge of the bed in trying to drink.

The advantages of the Solis-Cohn method of laryngectomy (in which the larynx is completely removed and the edges of the tracheal severed and fastened to the external edges of the cervical incision) are :—

1. Less danger to life from inspiration—pneumonia is greatly lessened.
2. Swallowing is as easy as under ordinary circumstances.
3. In at least three cases, power of phonation has been acquired with a voice at least as satisfactory as by any artificial mechanism.
4. The patient's comfort is greatly increased, while disfigurement and the need for an artificial larynx are entirely done away with.

As to the third variety of operation, Cheyne says that, as compared with the cancerous disease in the breast, the disease in the throat is in some respects more favourable for cure, and in some less so; more favourable as regards glandular deposits, for in the neck we have an extensive glandular area freely exposed to view; but less so because the disease in the larynx is less exposed to view and to operative manipulative measure.

It is advisable to do a preliminary tracheotomy a few days before operation. The patient must not be too old, must possess good vitality, must be free from physical defects likely to complicate recovery, and must be so situated as to enjoy careful after-treatment.

In reviewing the recent progress in treatment of diseases of the larynx, it must be apparent that it has nearly all been made by long and careful study on the part of general surgeons. The time has long gone by when an unsuccessful attempt at laryngectomy by one not fitted for the work can do anything else than bring reproach upon the operator and discredit upon the operation.

Dr. PORCHER regarded the Trendelenburg canula as a dangerous instrument. A preliminary tracheotomy should precede by some days the operation on the larynx, for if both operations were done at the same time, it was hard to tell whether blood was trickling into the trachea or not.

Dr. SEILER thought more credit was due to American surgeons than had been given by the reader of the paper. In 1885 Dr. Roswell Park had excised the larynx in a man of seventy-six years without a preliminary tracheotomy, for epithelioma of the vocal cords and left ventricular band. Chloroform was used, and the operation lasted one hour. The patient lived seven years.

Dr. H. L. SWAIN (New Haven) would lay stress upon the necessity of removing the cervical glands. These sometimes diminish in size after the tracheotomy is done.

Dr. ASCH believed gauze packing of the trachea preferable to the Trendelenburg canula.

Dr. JONATHAN WRIGHT believed that these cases should not be undertaken by the average laryngologist, but be placed in charge of the general surgeon.

Intubation in the Adult; with Special Reference to Acute Stenosis of the Larynx. H. E. CASSELBERRY, M.D. (Chicago).

Although chronic stenosis of the larynx, especially of the syphilitic and tuberculous type, has received due attention in reference to treatment by intubation in the adult, the management of acute stenosis by the same means has received as yet but little notice.

It does not suffice to assume that the adult may be dealt with exactly like the child, or that the treatment of acute stenosis, with its associated state of helplessness and exhaustion, is identical with that of chronic stenosis. Important distinctions obtain, both as regards the technique of the intubation and the possible scope of the operation.

The six cases related embrace four of laryngeal diphtheria, one of acute œdema of the larynx, and one in which the stenosis was of obscure origin, but probably also œdematous.

The diphtheritic cases all terminated favourably, but presented various difficulties in the performance of the intubations—notably, in one, the necessity to intubate with the patient in a recumbent or semi-recumbent posture in bed, to accomplish which the best position was with the patient on the right edge of the bed, and the operator standing to the patient's right, in which location one's right arm rises in front of the patient's mouth without awkward twisting of the operator's body. In another, at one time, firm spasm of the glottis, which was actually seen in the laryngeal mirror to occur, rendered a third effort necessary before the tube slipped into place. It was done under laryngoscopic view by holding the tube firmly at the entrance of the larynx for a few moments, which excited cough, and with it the opening of the glottis. All the cases showed some intolerance to the presence of the tube, as manifested by more frequent expulsion than with children. One case nearly succumbed from accumulation of viscid mucus—not in the tube, but in the trachea and larger bronchi, below and around the tube, which condition was at once suspended by the extraction of the tube.

The case of acute œdema of the larynx was complicated by chronic spasm of the masseter muscles, which prevented wide distension of the jaws. In consequence, intubation failed, the patient being measurably exhausted by the two efforts made. Tracheotomy was performed, but the patient died just as the operation was completed, presumably from failure of the heart in connection with secondary œdema of the lungs. Immediately *post mortem* the diagnosis was confirmed, and the feasibility of intubation demonstrated in acute œdema of the larynx with a patient recumbent, possibly collapsed, but uncomplicated by "setting" of the jaws, by (after death) forcibly distending this patient's jaws, when the tube could be passed and repassed with ease.

The liability to pressure decubitus by the tube in acute œdema of the larynx should be remembered, and not too large a tube inserted.

The other case, which was presumably one of œdema of the larynx, or of subglottic œdema, terminated favourably and without difficulty.

The following conclusions as to technique are formulated:—

1. For one accustomed to the use of the laryngoscope intubation on adults is easier and more certain under its guidance; therefore, for a

patient of adequate composure and able to maintain the sitting posture this method should be selected.

2. A patient lacking only composure, one whose inclination is to resist rather than to assist the operator, may be closely wrapped in a blanket to pinion the arms and legs, seated in a straight-back chair, the head inclined slightly backward, the mouth gagged, and the finger used as a guide, as in children.

3. A patient lacking strength to move from bed, and composure or strength for laryngoscopic insertion, should be placed close to the right edge of the bed, so that the operator can stand to the patient's right side; the head and shoulders should be well raised by pillows, the neck moderately extended, and the method by the sense of touch otherwise fulfilled. Kneeling on the bed in front of the patient is unnecessary.

4. A patient who is moribund, or nearly so, may have the tube inserted while in the recumbent position. The operator should stand to the patient's right, who should therefore be placed on the right edge of the bed.

Spraying the fauces with a five per cent. solution of cocaine facilitates introduction by whatever method, and tends to lessen the liability to premature expulsion.

The extraction of the tube is especially easy under laryngoscopic illumination, otherwise it is done in accordance with the same principles as regards the position of the patient as pertain to its introduction.

The author's posture method of feeding subsequent to intubation, by inclining the patient's head and shoulders downward, in which position fluids may be swallowed without gravitating through the tube into the lungs, can be successfully used with adults, but naturally with more difficulty at first than with children, on account of unmanageable weight and size. It is best done by hanging the head and shoulders over the edge of the bed downward nearly to the floor. Otherwise, adults more readily than children may be fed upon semi-solids, as custards, stiff corn starch, and oysters, which will slide over the top of the tube without entering it.

Regarding the scope of intubation for acute stenosis in adults, the four cases of laryngeal diphtheria herewith reported, all of which terminated favourably, justify the conclusion that this operation may with advantage be substituted for tracheotomy in that disease.

Concerning acute œdema of the larynx, one's position is not so clear. The operation is technically feasible in uncomplicated cases even when exhaustion is extreme, and I would consider a single attempt justifiable provided, in order to guard against pressure decubitus, the smallest size of the adults' set of tubes is first selected.

When complicated by having the jaw "set," or by pharyngeal swellings which might obstruct the top of the tube, either or both of which conditions may be encountered in cases of acute œdema of the larynx, secondary to peritonsillar abscess, Ludwig's angina, phlegmonous angina, retropharyngeal abscess, etc., intubation is absolutely contra-indicated, and fruitless efforts thereat can only serve to intensify the exhaustion and suffering of the patient.

There are other acute conditions or acute exacerbation of chronic states which might be remedied by intubation. In a case of arthritis deformans, which suffered an acute exacerbation involving the larynx, the dyspnoea was so urgent that I expected to be compelled to intubate at any moment for several days.

Traumatic œdema of the larynx as by scald, corrosion, or fracture might in suitable cases be treated in this way.

Laryngismus stridulus or reflex spasm of the glottis, though rare in adults, might constitute another indication.

Also œdema of the larynx secondary to chronic syphilis or tuberculosis might come within the same category, since the œdema may figure as an acute exacerbation provoking sudden and urgent dyspnoea.

The treatment of chronic stenosis of the larynx and trachea by intubation is not included within the scope of this paper.

Dr. SIMPSON said that we should not understand by the word "acute," as applied to diphtheria, the same thing as by "acute" applied to the œdema of Bright's disease, or œdema engrafted upon some chronic stenosis which has not been sufficient to impede breathing. In intubating all these cases, care must be taken to draw the tongue well forward.

Dr. HUBBARD had seen tracheal œdema while the larynx was normal. In one case intubation had been unsuccessfully tried, tracheotomy was done, but the patient died. In another case due to iodism there was œdema of the face, pharynx, and trachea with an intact larynx. This case had been relieved by pilocarpin.

Dr. DE ROALDES regarded intubation as the best procedure in fractured larynx.

Spindle-Cellled Sarcoma of the Nasal Passages. Dr. J. E. BOYLAN (Cincinnati).

At the time of introduction, the patient had suffered from obstinate epistaxis, stoppage of the nose, and occasional acute pain for several months. There was a noticeable bulging under the left nasal bone. Upon tilting up the tip of the nose, a brown-red mass at once became visible filling in the passage, which was found to be limited behind by the posterior nares. The growth was removed with wire écraseur in two sections, and the base curetted, hæmorrhage, which was quite profuse, being arrested by plugging with iodoform gauze. The removed growth appeared as a solitary, soft, liver-coloured tumour, the size of a hen's egg; the attachment, about an inch and a half long, having probably been confined to the inferior turbinated body. Expert microscopic examination showed the growth to be a spindle-celled sarcoma. A year from the date of operation, inspection of the patient exhibited no signs of recurrence. Twenty-two months after the operation the patient announces that he finds himself without symptoms of recurrence and in excellent health.

The case is offered as a contribution to the accumulating number of results which tend to modify the hopeless prognosis attributed to sarcoma. Twenty-one cases taken from the literature, since Bosworth's tabulation of 1889, were enumerated, and the results referred to.

Naso-Pharyngeal Fibrous Tumors. Dr. E. FLETCHER INGALS (Chicago).

Case was reported of a boy aged eleven years, and seen in April 1894. From his fifth year there had been a fulness of the right cheek associated with nasal stoppage. His general condition was good, the voice had a nasal twang, and the sense of smell was deficient. The nostril (right) was occluded by a reddish mass in its posterior third, but there was no tumour in the cheek. The patient was seen again three months later—when under cocaine injected hypodermically, and used in spray, the growth was removed by the galvano-cautery *écraseur*. There was considerable hæmorrhage from the nostril, which was checked by packing with surgeon's lint dipped in a saturated solution of iodoform in ether, and then a boric acid solution in alcohol; then thymol in albolene was used. By subsequent cauterizations the base of the growth was thoroughly destroyed, but some cicatricial adhesions remained in the vault.

For the swelling in the cheek under the right zygomatic arch, measuring two by three centimètres, submucous injections of lactic acid were made, fifteen minims of a twenty-five per cent. solution combined with a little three per cent. carbolic acid and twelve per cent. glycerine, being about the average quantity employed. There was some increased swelling after injection; but the injections gradually removed about two-thirds of the original mass. Dr. Ingals believed this remedy good in cases where the knife or galvano-cautery are inapplicable.

Naso-Pharyngeal Fibromata. Dr. CHARLES M. SHIELDS (Richmond).

The author read a paper on this topic, reporting two cases.

The first case occurred in a white male, aged twenty-three. The growth was firm and unyielding to the touch, and filled the post-nasal space and left nostril. It was attached to the vault of the pharynx, and for a short distance to its posterior and left lateral wall, and in the left nostril to the outer wall for about half its length. It closed the right nostril by crowding the septum to that side, completely shutting off nasal breathing, and producing the typical "frog face" and "dead" voice.

After injecting a ten per cent. solution of cocaine with a hypodermic syringe into the left nostril, a filiform bougie was with difficulty worked through to the throat, having attached to its anterior end a piece of silk, and this in turn to the sharply-bent loop of a cold wire snare, which was in this way pulled back into the throat and out of the mouth, and fashioned into a well-rounded loop. The nasal ends of the wire were threaded through the canula of the snare and drawn up. For five hours it was tightened by turning the nut with a pair of gasfitter's pliers, when the wire broke. The next day the loop of a galvano-cautery snare was in like manner drawn through and applied, cutting through the growth in a few minutes, which was pulled down and out of the mouth. Its base measured one and a quarter by one and two-fifths of an inch.

The portion in the left nostril was also removed with the cautery snare.

The patient returned for examination after fourteen months, and a piece the size of a grain of corn was found and removed from the left

nostril, and some thickening at the seat of the main tumour at the vault of the pharynx cauterized.

Dr. Shields stated that he reported the second case while it was still undergoing treatment, because of the fact that it occurred in a woman of forty-eight years of the negro race. Nélaton, Gosselin, and other older observers considered women exempt from these tumours, and Morell Mackenzie states them to be most exceptional, yet we know that women do not possess complete immunity. As to race, however, he considered the case to be unique, never having seen a case reported in a negro. Bosworth likewise states that he has never seen a case reported as occurring in that race.

This patient had a tumour filling the entire post-nasal space and pushing the palate well forward, but with no nasal attachment. Electrolysis had been tried for six weeks with but little reduction in size resulting. A piece cut from the tumour and examined with the microscope showed it to be a true fibroma. In speaking of the treatment of these tumours Dr. Shields thought that there were few—if any—that could not be reached through the natural passage, and that resection of the superior maxilla or other preliminary operation was rarely required. He considered the use of the ligature, chemical caustics, thermo-cautery, evulsion, etc., as not worthy of consideration in comparison to the use of the hot or cold snare. In the majority of cases the galvano-cautery snare possessed most advantages, and when irido-platinum wire was used it was sufficiently elastic to be placed over the tumour by aid of the finger in the post-nasal space, and was very much stronger than the ordinary platinum loop. The current should be turned on for a few seconds, and then a rest of a minute or two given the patient before the wire was again heated. In this manner the periods of pain were of very short duration, and the wire does not become hot enough to cause hæmorrhage. The hot snare does in a few minutes what the cold one may require hours to perform, thus shortening the pain to the patient. With it, too, we have an instrument capable of cutting through the largest and firmest tumour with certainty—a fact of which we cannot be sure with the cold snare.

Another advantage in tumours with a broad base is that after being placed in position the loop can be heated and at once buried in the growth at its preliminary tightening, thus preventing it from slipping off. Finally, while removing the growth it thoroughly cauterizes every portion of the remaining base.

Dr. CASSELBERRY alluded to two cases—one successful, and the other an utter failure owing to adhesions surrounding the mass. It was a good plan to slit up the mass with the cautery knife, so as to afford a hold for the wire. He had seen some good results follow the use of electrolysis.

Dr. NICHOLS said it was difficult to remove such tumours through the nasal passages owing to malpositions of the nasal septum. In one case he had been able to shell the tumour out.

Dr. DE ROALDES said that by slitting the palate these growths could be made much easier of access.

THE BRITISH LARYNGOLOGICAL, RHINOLOGICAL, AND
OTOLOGICAL ASSOCIATION.

April 10th, 1896 (continued).

Dr. MACINTYRE'S Röntgen Rays Demonstration.

The following objects were shown at the demonstration :—

Apparatus.—Secondary cells, induction coil, several varieties of Crookes tubes, some of which had been prepared at special exhaustions.

Photographs.—Firstly : The photographs were shown either by means of the magic lantern screen or mounted plates, or both, including different parts of the skeleton, such as the spinal column, ribs, clavicle, bones of the head, face, and all the joints of the body.

Secondly : Objects of special interest in the throat and nose, including bones of the face, internal ear (in the dead subject), mastoid cells, jaw, hyoid bone, cervical, and vertebrae.

Thirdly : Photographs of the soft tissues of interest in our special department, such as the tongue, larynx with its cartilage, cavity of the pharynx and opening of the oesophagus, showing the relationship to the deep structures of the neck and spine.

Fourthly : Pathological conditions, including tumours of the jaw, fractures, periostitis, foreign bodies in the region of the neck and chest—in one case a coin impacted in the oesophagus beside the third dorsal vertebrae—etc.

Fluorescent screens and cryptoscopes.—Screens prepared with barium-platino-cyanide, potassium-platino-cyanide, lithium-rubidium-platino-cyanide, calcium sulphate, calcium tungstate, magnesite, etc.

Cryptoscopes.—Simple and binocular, with suitable screens of the above-mentioned salts.

Mr. President, Ladies, and Gentlemen,—I should like in the first place to correct the title of my demonstration as published in the medical journals. There it is entitled "The New Photography," a term to which I object very much, because Röntgen did more for surgeons than provide us with a means of photographing hidden objects. At present we can actually see a great many images of anatomical structures by means of Röntgen's fluorescent screens, and for practical purposes this must in the end displace the more tedious and direct method of photography.

You will notice in the following remarks that I rarely use the term "skiagraph"; not that I have any particular objection to the introduction of a new term in medicine or surgery, but I think the word does not describe the pictures which we are now able to take. At first, no doubt, we obtained little better than shadows; but those who have had the best results can fairly claim that the intimate structures as well as the outline may be obtained, and in this sense we can scarcely call them shadows. Moreover, the term was adopted at the earliest period of the discussion as to the exact nature of the x rays themselves. Now, while at first these observers might be inclined to think they were longitudinal vibrations in the luminiferous ether, a considerable number of physicists are now inclined to look upon them as transverse vibrations, probably far beyond

what we have hitherto considered the ultra-violet end of the spectrum. Should this view be the correct one, then these will literally be photographs or drawings by light.

In my earliest experiments I devoted myself entirely to the simplification of the apparatus, because the descriptions in the newspapers—at least, in this country—suggested great complications. One read of ten to twenty thousand volts alternating current; batteries of twelve Leyden jars, etc. It was quite evident, therefore, that for practical purposes in surgery, and particularly with a view to portability, something very much simpler would be required. As early as the 5th February of this year, at a demonstration given at the Philosophical Society, Glasgow, by Lord Blythwood, Dr. Bottomley, and myself, I was able to show that all the ordinary phenomena of photography could be demonstrated by means of a secondary battery giving eight volts and six ampères of current, an induction coil giving two to three inches spark, and a Crookes tube not specially designed, and selected from an instrument-maker's stock. Under certain conditions I found it advisable to use a Tesla coil in addition to these, but need hardly say now this part of the apparatus may be dispensed with. My best apparatus consists of the current supplied from the main, and measured by Lord Kelvin's ampère gauge and volt tester, a rheostat to reduce the strength as desired, a transformer in the shape of an induction coil giving 10-inch spark, and the ordinary focus tube selected by Mr. Herbert Jackson and designed by Crookes himself years ago.

The Crookes tube is such an important part of the apparatus that I think it well worth special consideration. We now make these tubes in Glasgow, and when it is being exhausted I superintend the details by testing the result on fluorescent screens until the maximum has been obtained. At present we have no fixed rule, nor can the instrument-makers predict what will happen with a tube when it leaves the pump; and in the absence of these facts I simply go and test it while it is being exhausted. It will be observed that after a tube has been used for a few minutes changes take place in the fluorescence and actinic power. If this be not carefully attended to the results are very unsatisfactory; but by gently heating the tube with a spirit lamp or Bunsen burner it is quickly brought back to an efficient state, and by this means the exposures are reduced and the fluorescence more brilliant.

When I began my experiments I naturally directed my attention particularly to objects in the throat, chest, nostril, head, and face; but it was found impossible to get anything like a real knowledge of the photography or images on the screens without going through a careful training in different parts of the human body. My first photograph was taken on the 31st January, and by the 30th March I had taken photographs of all the skeleton and joints, including the vertebral column and the interior of the skull. While making these experiments it became evident that three very important things would require to be carefully considered if correct images were to be obtained:—(1) penetration, (2) definition, (3) how to obtain the deep-seated structures in the human economy without photographing what might be in front, or behind, or in

the vicinity of the particular object to be photographed. I should like to say a word or two on each of these points. Firstly, with regard to penetration. The secret of penetration lies, of course, in a powerful enough apparatus, but not the least important is a good Crookes tube at a proper vacuum. When I say that I have been able to pass the rays in sufficient enough strength through the human body to see images of, as well as to photograph, the vertebral column, ribs, and all the joints of the body, it will be evident that we have here a force capable of penetration beyond anything at first conceived. Nay, more: two persons placed in front of each other only absorb a certain amount of rays, and, in fact, they can be passed through the wall in one room in sufficient strength to obtain fluorescence in the next. Each structure of the human body absorbs the rays more or less, but it must be evident that what we desire in surgery is not only sufficient penetration, but definition, so as to bring out the particular structure we are examining in contrast with the others. By carefully studying this I have been able to photograph not only the bones but the fasciæ and tendons, some of the muscles and cartilages, particularly of the larynx, cornua and body of the hyoid bone, and these in the living adult subject.

Secondly, definition. While it is true we have no method at present of focussing in the ordinary sense—that as yet we have no evidence of refraction and reflection—yet correct definition may be obtained after the following manner:—If a piece of white paper be laid on the table, and a pencil held at a short distance away from it, a shadow of the pencil will be got on the paper. The nearer the pencil is to the paper the sharper the image will be. If the pencil be now removed from the paper towards the source of light the shadow will become less distinct; but if the pencil be held in that position and the source of light removed still further from the pencil the shadow becomes more and more distinct. Hence we could formulate a rule that there is definite relationship between the position of the source of light, the object to be photographed, and the piece of paper upon which the shadow is to be thrown; therefore, the further the distance of the object to be photographed from the sensitive plate the greater must be the distance between the object and the source of the x rays. In attempting, therefore, to photograph the deeper structures of the body or the tissues of the neck, it is evident we cannot get the object close to the sensitive plate, so the Crookes tube must be removed a greater distance from it. No doubt this increases the exposure, but that will shortly be overcome with further improvements in the tube.

Thirdly, how we are to photograph certain objects and omit others in the vicinity. Let us take, for example, the skull as seen on the screen. I have been able to show that one can photograph straight through the skull and omit one side of the head in the picture and photograph the other, although both are in the course of the x rays and between the sensitive plate and the Crookes tube. This is one of the many advantages of the "focus tube." In this particular apparatus the cathodal torrent is sent from the aluminium disc at the one end of the tube and focussed on a small square of platinum placed directly in its course. The x rays

spring from this point and radiate in every direction ; in other words, form a cone, the apex being at the platinum plate. It naturally follows that the x rays are not proceeding on parallel lines, but are all diverging from a point. Consequently, if an object be placed very near the source of the x rays a very indistinct image will be got on the sensitive plate, but those structures which are near the plate (the other side of the cranium) are photographed. Of course, were the bones of the head capable of stopping all the x rays nothing would be got, but it is only a matter of absorption in degree, so that when we are photographing through the skull sufficient force passes through the one side to photograph the bone on the other, but the image on the side next the tube is so diffuse that it is not seen on the plate. By this means one can select different bones in the body, and so we can photograph the mastoid cells, or even show the grooves for the meningeal arteries and the sutures between the parietal and occipital bones.

EXPOSURE OF PLATES.

Passing now to the more practical aspect of the question, let me say the question of exposure is of great importance. My first photograph was taken in forty minutes--the last in half a second, with Paget XXXXX plates and hydrokinone developer. This advance I attribute for the most part to a good Crookes tube and a better knowledge of how to keep the vacuum right during the exposure. There can be no doubt that we will shortly have instantaneous photography.

DIRECT VISION.

While photography may be exceedingly interesting to us for permanent records, no one can doubt for a moment that what the surgeon requires is examination of the various structures by means of fluorescent screens or direct vision. I have now prepared a number of these screens, and have seen images of the spine, ribs, and most of the joints of the body. I prepare the screens by making a frame of wood of suitable shape and size, and a piece of paper (preferably black) is afterwards damped on both sides and glued to the frame. When dry, the paper is stretched, and gives a flat surface to be coated with the salt. When the paper is thoroughly dried, one surface is covered with gum arabic or liquid glue and a thick layer of the salt uniformly spread upon it. Another method, which I described in "Nature" some time ago, is to mix the salt with a solution of mucilage or gelatine until it is about the consistency of collo-dion, and, just as in the old wet process, this is poured on the surface of the paper—or for that matter on a sheet of glass—and moved backward and forward in such a way as to get an even layer to remain on the plate. I have tried barium-platino-cyanide, potassium-platino-cyanide, lithium-rubidium-platino-cyanide, sulphide of calcium, the calcium tungstate as recommended by Mr. Edison in its crystalline form, and many other fluorescent substances ; but my choice lies between the barium and platinum double salt. The potassium has greater fluorescence, but sometimes, and under certain conditions, we obtain a more pleasing picture with the barium ; at least, that has been my experience.

The salt recommended by Mr. Edison has one great recommendation

in its favour, viz., it is comparatively cheap ; but it is not as good. There is a mistaken notion abroad that the work done on fluorescent screens and the cryptoscope are one and the same thing. This is entirely wrong. Salvioni and others have made an instrument called the cryptoscope. In the early part of February of this year I obtained some of the crystals of barium-platino-cyanide from Lord Blythswood, and made an instrument quite independent of any other worker. What I wish the meeting to understand is the difference between a fluorescent screen and the cryptoscope. I have been surprised to see in some of the medical journals how these two terms have been confounded. Röntgen himself is entitled to the credit of demonstrating the phenomena by direct vision, and those who take the trouble to read his original paper will see that the first paragraph of his famous work and the first experiment of a successful nature carried out by himself prove this. He states that by enclosing a Crookes tube, excited by means of a battery, in a cardboard covering, and placing a piece of paper coated with barium-platino-cyanide in front of it, an object between the two will have its shadow thrown on the screen, which fluoresces under the action of the rays. The only difference in a cryptoscope is that we use a small box instead of the darkened room, and of course this has something to recommend it in practice. There is no injustice to Salvioni in this statement, because he acknowledges in his own paper that there is nothing which could not be deduced from Röntgen's original experiments in anything he has done. My first difficulty was to obtain fluorescence, and the earliest experiments failed because the coating was not thick enough. By properly preparing the screen, however, and exhausting the tube to its maximum, I have been able to examine the cavities and bones of the face, chest, spine, clavicle, sternum, ribs, etc. A boy was sent to me last week from the Glasgow Royal Infirmary, who six months ago had swallowed a half-penny, and complained of great pain always after food in the region of the cardiac orifice of the stomach. I examined him by means of the fluorescent screen, and had no difficulty in seeing straight through the body in the region of the spine, but obtained no evidence of the coin where he located the pain. On passing the screen up the spine, however, I saw the coin lying near the third dorsal vertebra. He was consequently photographed, and a lantern slide of this is now thrown on the screen.

CRYPTO-LARYNGO- OR RHINOSCOPE.

It was natural that those devoted to the special surgery of the larynx should seek for the application of the method in their own department, and with this view I made a number of experiments in order to obtain a lamp small enough to go inside of the mouth. The result was quite satisfactory, but the objects are too near to be seen or photographed. I therefore tried another plan, and now place the fluorescent screen inside of the mouth and the lamp outside. I made some small mirrors coated on one side with the salt and covered with aluminium. Again, I made some tongue depressors, simply flat strips of glass, coated and covered in the same way. By placing the tube outside I was able to get an image of the septum and other parts of the cavity on the fluorescent

screen in the mouth. In the same way the roots of the teeth may be seen. If you wish to examine the parts below or above the lower jaw you simply put the Crookes tube below or above the level of the neck and pass the rays through the tissues. If you desire to examine the tissues externally—that is to say, if you wish to pass the current through the neck—you place a small fluorescent screen on one side and remove the Crookes tube to a suitable distance. By this means I have no difficulty in demonstrating the presence of foreign bodies, and need hardly add they are easily photographed. This application I intend, with your permission, to name the laryngo-cryptoscope or laryngo-rhinoscope, according as we use it in the different parts of this region.

And now the question will naturally arise in the minds of all present how far these rays are likely to prove useful in our special department. Personally, I prefer to leave the speculative field very much alone, and state what has been accomplished. I may be allowed, however, to point out that I have already clinically proved its use in the detection of foreign bodies in different parts of the upper respiratory tract. Further, the fact that we can see and photograph different structures in the neck localises these objects; and, again, in the case of the larynx, and certainly in the case of the œsophagus, it is easy to see instruments made of certain materials (particularly of steel) during the action of attempted removal of foreign bodies. Secondly, in one of the photographs shown upon the screen you have seen destruction of the hard tissues of the upper jaw from malignant disease. Thirdly, we have here got a force capable of doing a great deal more than penetration, as is the case of the illumination of the antrum of Highmore by means of ordinary light; by the arrangement above suggested we can now recognize some, and will very likely, as time proceeds, be able to recognize the outlines of nearly all the deep-seated structures on fluorescent screens. Some have said that the soft tissues are transparent to the x rays; this is wrong, as all tissues absorb some of the rays. It is only a matter of degree. I could say much more in this direction, but think the possibility of the utilization of Röntgen's discovery in our special department has already been sufficiently demonstrated.

SOCIÉTÉ FRANÇAISE d'OTOLOGIE et de LARYNGOLOGIE.

May 4th to 7th, 1896.

(From "La Semaine Médicale.") Reported by Dr. JOAL.

M. POYET. *Treatment of Diffuse Papilloma of the Larynx.*

Of all tumours of the larynx, papillomata are the most frequent. They are usually situated at the anterior angle of the vocal cords, but in certain cases they invade a greater or less extent, or even the whole, of the larynx. These are the diffuse papillomata, and they are found in very young children, or else in patients in whom a single circumscribed papilloma has gradually spread over a large area by a process of auto-inoculation.

What treatment should be carried out?

In young children tracheotomy should be done, and should be accompanied or followed by thyrotomy and curetting of the larynx. In children of six or seven years old, if there is danger of asphyxia, the above treatment is indicated; if, on the other hand, respiration is not affected, one ought to endeavour to operate per *vias naturales*, specially as papillomata once removed endo-laryngeally do not tend to recur in young people. The best instrument to use in such cases is the crushing forceps; cutting instruments are dangerous in children. In adults, local caustics have been tried, but without success—*e.g.*, nitrate of silver, acetic acid, dilute chromic acid, chloride and sulphate of zinc, sulphate of copper, alum, savin, etc. Surgical treatment should be at once resorted to.

Evulsion is carried out by means of forceps of various forms, the best known being those of Fauvel and Mackenzie. Under cocaine their use is quite easy, specially when the papilloma projects beyond the level of the glottis. The operation is generally followed by a fairly smart hæmorrhage, which, however, soon ceases of itself.

Excision may be done with scissors, knives, or guillotines, and is suited for papillomata springing from the free edge of the true or false cords.

Evulsion and excision combined may be used for hard warty papillomata; the instrument to use is the cutting forceps.

Abrasion consists in crushing between the blades of the forceps any portions of the tumour that one can seize.

Curettage completes the operation by scraping away whatever has been left by any of the above methods.

The *galvano-cautery* is little used now, because it is impossible to apply it to a growth long enough to be effective.

To prevent recurrence of the growth, the larynx is to be swabbed out with antiseptic cotton wool and the bleeding stopped, then a solution of chloride of zinc or salicylic acid applied.

If on recurring the papillomata become hard and warty, and appear to degenerate into epitheliomata, tracheotomy should be performed, then thyrotomy, and a careful and thorough removal of all affected parts. The simplicity of the operation of thyrotomy should prevent any hesitation in adopting it when the growths are very diffuse, or when they recur frequently. In these cases, after thoroughly curetting the parts, the thermo-cautery should be applied.

Extirpation of the larynx is to be avoided, even when there is reason to fear malignant degeneration of the papilloma.

M. HELME. *Treatment of Adenoid Vegetations.*

In spite of all that has been done since the time of Meyer, the only effective treatment of adenoids is the surgical.

The indications for treatment are not only signs of nasal obstruction, but remote symptoms, such as headaches, laryngismus stridulus, enuresis nocturna, obstinate otorrhœa, deafness, etc. Diagnosis of adenoids must always be confirmed by posterior rhinoscopy, or by digital examination; in this latter the most rigorous antisepsis must be carried out.

Contra-indications are very few—*viz.*, hæmophilia, anomalies in the pharyngeal arteries. The coincidence of an acute tonsillitis, or of

scarlatina, measles, etc., necessitates the postponement of the operation.

Before operating a local and general antiseptic treatment should be prescribed, and the operation should be done during narcosis.

Bromide of ethyl freshly prepared is the best anæsthetic. Five to ten grains will produce the desired effect in from twenty to forty-five seconds.

The operation may be done (1) with curette, (2) with forceps and curette (mixed method), or (3) with the electric curette (Chatellier, Rousseau). The operation with electro-curette has the disadvantage of requiring a complicated outfit.

After operating no dressings are to be used, especially no washing of any kind. Food should consist of iced milk and bouillon the first day; eggs, puddings, and cooked fruits may be allowed the second day; and by the third day ordinary diet.

There should also be mentioned the methods (1) of Chiari (per nasum), (2) removal by forceps in several sittings, and (3) curetting with the finger-nail.

In the new-born anæsthesia is not required; in the adult it is to be obtained by insufflating powdered cocaine and sugar of milk—equal parts.

Often adenoids are accompanied by hypertrophy of the faucial tonsils. These must be treated separately. Further, there may be hypertrophied turbinateds, spurs and deviations of the septum, etc. All these must receive appropriate treatment.

Properly speaking there is no recurrence of adenoids. Apparent recurrence is generally due to incomplete operation; true recurrence may occur in syphilitic, tubercular, or malignant tumours. As a rule improvement is immediate and marked, but in strumous cases it may be less so. In these one should carry out local treatment, consisting of painting the naso-pharynx with resorcin and glycerine, also general treatment (thermal, sea-air, etc.).

Amongst the results of adenoids the worst are deformities of the thorax and vertebral column. Redard obtained good results in such cases by treating them with a sort of respiratory gymnastics, consisting in expanding as much as possible the affected parts while the normal parts are held fixed. To overcome defects of speech, rational and methodical respiratory movements, voice culture, singing, declamation, etc., are to be used.

Lastly there are the tubercular adenoids. Of these there are two types: (1) bacillary adenoids (Lermoyez), *i.e.*, where the bacilli are found inside the tissues—very rare, only one to seventy-five cases; (2) bacilliferous adenoids, *i.e.*, where the bacilli are found on the surface of the growths (Diculafoy)—one to five cases.

Although these growths tend to shrink with advancing years, they must not be left untreated; for while disappearing themselves they leave indelible traces behind.

M. GAREL (Lyon). *Hereditary Syphilis simulating Adenoid Vegetations*. Two cases.

The first case had been operated on by a colleague, and eight days later perforation of the palate was found.

The second case was a young girl with the typical taudes of adenoids. M. Garel refused to operate on account of a serious cardiac lesion. Two months later the breaking down of a gumma caused perforation of the palate.

Both these cases rapidly recovered under potassium iodide.

The speaker insisted on the importance of careful diagnosis in such cases, in order to save the patient an operation which, if not dangerous, was, at least, useless.

M. A. MARTIN (Paris). *Reflex Disturbances due to Hypertrophied Posterior Ends of the Inferior Turbinates.*

Apart from respiratory disturbances due to nasal obstruction, there are reflex troubles—(1) general (headaches, neuralgias); (2) local (tinnitus alone, tinnitus with diminished hearing power, nasal disturbances with tickling sensations of the posterior part of the nose). These are mostly due to the turbinated touching other parts, and can be relieved either by free cauterization, or by ablation of the posterior end of the turbinal.

M. M. BOULAY (Paris). *Epileptiform Crises and Hypertrophy of the Tonsils.*

Amongst the numerous nervous affections, local or remote (cough, glottic spasm, asthma, headache, etc.), which may accompany the various lesions of the nose and pharynx, particularly hypertrophy of the pharyngeal tonsil, the rarest are the convulsive phenomena. The following case is a typical example of epileptiform crises accompanying large tonsils. The patient was a boy, twelve years old, who had suffered for two years from nocturnal crises, with the following characteristics: sudden awakening with anxiety, tingling of tongue, loss of consciousness, and convulsions of tongue, lips, face, and often of the four limbs, with embarrassed respiration and threatened asphyxia; the whole attack lasting five to ten minutes. The child had immense tonsils and adenoids. From the day on which the tonsils were removed the attacks ceased and never returned; the adenoids were removed later.

M. LUBET-BARBON. *Mastoid Abscess without Suppuration of the Tympanum.*

Mastoid abscess is generally consecutive to tympanic suppuration. Cases, however, occur in which either there has been no such suppuration, or else it has been so slight as to pass unnoticed. These abscesses are distinguished by their slow insidious progress, seeming to call for no treatment. Various complications may arise, quite without the surgeon's knowledge, such as congestion-abscesses, cerebral abscess, meningitis, or general infection. Once these have started local treatment is of no avail.

In contrast to mastoid abscess following tympanic suppuration, these abscesses are situate in the cells of the point of the mastoid process. The antrum remains unaffected, or its mucous membrane is simply thickened and granular. Treatment, consequently, must consist in the systematic opening of the cells of the point of the process.

M. E. J. MOURE (Bordeaux). *On Certain Anomalies of the Mastoid Region.*

The speaker pointed out that anatomical investigations on ordinary normal temporals gave no exact information as to the position of antrum, etc., in pathological conditions. Eburnation of the mastoid was much more frequent than was generally supposed in old cases of otorrhœa. The antrum itself, often greatly reduced in size, was often not at all in its proper position. In thirty-four cases opened during the last fifteen months M. Moure had found the mastoid eburnated twenty-five times. In four cases there was, properly speaking, no apophysis; it was replaced by the lateral sinus, which was opened once.

M. ESCAT (Toulouse). *Congenital Stenosis of the Nasal Fossæ and of the Naso-Pharynx simulating the Symptoms of Adenoids.*

Three cases are related—the first a man of twenty-two years, the second a child of six, the third a man of fifty-six—all presenting in a marked degree the symptoms and signs of adenoid vegetations. There were no adenoids present, but atresia of the nasal fossæ and naso-pharynx. One finds such patients microcephalic, or, more frequently, dolichocephalic. Hearing is not so much affected as in cases of adenoids, the deafness being probably central. Mental debility, rather than aprosexia, is present. These cases show that a diagnosis of adenoids must not be made from symptoms alone, but only after careful post-rhinoscopic examination.

MM. LANNOIS and JABOULAY (Lyon). *Hemianopsia in a Case of Otitic Cerebral Abscess. History of a Case.*

The patient, who had had otorrhœa for twenty-five years, suddenly presented symptoms of cerebral abscess (vertigo, staggering, intense cephalalgia, right hemiparesis); further, there were word blindness and conduction aphasia—no word deafness; lastly, homonymous right lateral hemianopsia, with retention of the pupillary reflex. The seat of the abscess was thus very precisely indicated.

The mastoid was opened, the skull trephined, and punctures made into the brain—at first without effect (probably because only a needle was used), but later bringing away a large quantity of pus. The autopsy confirmed the diagnosis of abscess of the occipital lobe.

The speakers remarked that aphasia from otitic cerebral abscess was most frequently a "conduction aphasia," and that a case of pure motor aphasia did not exist. They also insisted on the importance of seeking for some such aid to localization as hemianopsia in all cases of cerebral abscess.

M. LERMOYEZ. *Chronic Anæmia of the Labyrinth; the Nitrite of Amyl Test.*

The semeiology of the internal ear is still far from complete, specially as regards the determination of the exact seat and nature of labyrinthine lesions. It will be perfected no doubt chiefly by the anatomico-clinical method, which has already given such excellent results in the hands of Ménière père, Moos and Bezold. The following purely clinical observation is sufficiently precise and simple to help in the right direction.

The patient was a man of forty-five, diabetic, fat, alcoholic, who four

years ago, in consequence of some gastro-hepatic disturbance, was suddenly put on an extremely strict diet. Ear affections soon appeared—vertigo, tinnitus, and deafness gradually increasing till the patient was no longer fit for active life. When I first saw this man I found, besides well-marked median dry catarrh, a very pronounced labyrinthine insufficiency. Attributing this to a chronic labyrinthine hyperæmia, due to the stomach condition, I treated accordingly, with the effect of increasing all the symptoms. At last, struck with the fact that the patient heard better after a meal, and was rendered almost totally deaf for days by a strong purgative, I began to suspect that, not congestion, but rather anæmia of the labyrinth, must be the cause of all the ear symptoms. To confirm this diagnosis I made the patient inhale a few drops of amyl nitrite. Immediately the tinnitus ceased, and the hearing power for low voice increased from twenty centimètres to thirty-seven centimètres. I then prescribed a prolonged course of trinitrine, and one month later the hearing power had increased from thirty-nine centimètres to two mètres.

It thus appears that there are two forms of circulatory disturbance of the labyrinth, viz., hyperæmia and anæmia, having symptoms so much alike that none of the classical signs suffice for a differential diagnosis. But the nitrite of amyl test is decisive.

Let the patient inhale a few minims of nitrite of amyl. If there is congestion of the labyrinth the tinnitus and deafness will increase considerably; if anæmia of the labyrinth, the tinnitus will diminish and the hearing power increase at once, as if an air douche had been given. There is no danger in such a use of amyl nitrite. Unpleasant effects, however, are produced by the repeated use of the drug—besides, it very soon loses its efficacy. I therefore prefer trinitrine (as used by Huchard in the treatment of angina pectoris), either combined with the treatment of the pathological cause of the anæmia, when that can be discovered, or alone, in the very much larger number of cases in which the cause remains unknown.

M. LACARRET (Toulouse). *Post-Diphtheritic Pseudo-Hypertrophy of the Tonsils.*

A child, four years old, had been treated for diphtheria with an injection of serum. After the inflammatory symptoms had passed off completely there occurred an enormous swelling of the tonsils (so that they met in the middle line), pale, and of a wooden hardness. There were certain general symptoms of leukhæmia. Appropriate treatment was instituted. The elimination of the diphtheritic poison cleared off these symptoms and induced atrophy of the tonsils.

M. P. BONNIER. *A form of Deafness; a Genital Reflex.*

There is a form of deafness which at times may become almost total, but which, when the patient's attention is aroused, may completely disappear, thus showing the complete integrity of the ear—i.e., the peripheral part of the organ of hearing. I have seen three such cases: the first, a boy with inguinal hernia; the second, a boy, a monorchid; and the third, a young girl who masturbated. There were no nervous stigmata and no hereditary blemish.

Arthur J. Hutchison (Trans.).

HARVEIAN SOCIETY OF LONDON.

Meeting, April 16th, 1896. ("Brit. Med. Journ.," May 2, 1896.)

J. W. DREW, M.R.C.S., *in the Chair.*

Swellings of the Parotid.

Mr. RAYMOND JOHNSON read a paper on an unusual form of swelling of the parotid, illustrated by five cases—two in adults, three in children. The essential feature was swelling and induration of one parotid gland, of rapid onset (often occurring during a meal), and persisting for several weeks. Pain during mastication was considerable, and in one instance redness and œdema occurred. In one case recurrent attacks took place during two or three years, commencing always in the socia parotidis. The view was expressed that the swelling was caused by blocking of Stenson's duct, due to inflammation of its lining: a view which was supported by the fact that in two cases pressure on the swollen gland produced an escape of ropy mucus from the orifice, followed by a free flow of saliva.

Dr. COODE ADAMS suggested the possibility that the swelling was of reflex origin. In the dog arrest of salivary secretion took place if the intestines were handled; and, referring to Stephen Paget's work, he suggested that many so-called cases of mumps were due to reflex hyperæmia, the result of intestinal indigestion.

Dr. DUNDAS GRANT, remarking on the rapid improvement in one of the cases after the application of liniments of potassium iodide, related a similar experience in a case of suppurative parotitis. He had observed that in mumps, pilocarpin influenced the course of the disease most favourably, in contradistinction to belladonna, and that the former drug was the best remedy for labyrinthine effusion occurring in this disease.

Prognosis in Chronic Non-Suppurative Catarrh of the Middle Ear.

Dr. WILLIAM HILL excluded from the discussion cases of only a few months' standing, and of deafness in children and young persons. In adults permanent damage was likely to occur where catarrh had existed for six months. After dealing briefly with the more obvious factors which influenced prognosis, the author said that he considered a sudden onset, particularly if due to nasal or pharyngeal catarrh, as a favourable point in the history. Exceptions to this rule were tympanic disease of syphilitic origin, or extensive destruction produced by exanthemata. When the deafness was due to throat and nose lesions, provided the damage to the tympanum was not great, the outlook was good if the cause could be removed, even when on account of want of ventilation from the blocked tube the impairment of hearing might be considerable; and even in long-standing cases the result was occasionally gratifying. Chronic cases of gouty, rheumatic, and malarial origin usually resisted treatment, especially when salicin, quinine, and alcohol had been taken in excess. Deafness of dental origin must come under treatment early to obtain a cure. After

mentioning the unfavourable character of cases of sclerosis, and the favourable import of fluctuation in the extent of deafness, the author spoke of the indications to be derived from the results of inflation, etc. He considered that the prognostic value of tinnitus, paracusis Willisii, and vertigo had been over-estimated.

Dr. DUNDAS GRANT expressed his accord with Dr. Hill's views. In his experience prognosis was less favourable in females than in males.

Ernest Waggett.

CONGRESS FÜR INNERE MEDICIN IN WIESBADEN.

April 8th to 11th, 1896.

Therapeutic Application of Thyroid Gland.

EWALD (Berlin). Baumann's thyro-iodine is a great physiological step, and is a substance which produces most remarkable effects. Notkin's conclusions that the pathological effects of thyroidectomy are produced by accumulation of toxic albuminoid substances is not proved. With Fränkel's thyro-antitoxin one is able to cure thyroidectomized animals. Thyro-iodine alone will not antagonize the effects of thyroidectomy, but by thyroïden this effect can be obtained. The results of using thyroid gland are increase of secretion and excretion, and in subjective symptoms, such as palpitation, anorexia, etc. In no case has iodine intoxication been observed. In some cases acceleration of respiration and erythemata have been observed. Glycosuria and albuminuria have also been noticed. In cases of myxœdema and cretinism influenced by thyroid treatment the latter must be intermittent, and never can be totally left off. Concerning Basedow's disease, we have not yet certain opinions. The author concludes that thyroid gland is a potent remedy whose effects are not yet sufficiently understood.

BRUNS (Tübingen). Its greatest effect is manifest in cases of extirpated goïtres. Schiff has found that by implanation of thyroid glands in the abdomen of thyroidectomized animals the symptoms of cachexia strumipriva can be prevented. Then followed the subcutaneous and external application of the gland in cases of myxœdema with better results. It is now only administered internally. Good results are obtained in cretinism and goïtre. In three hundred cases the diminution of the circumference of the goïtre was one to eight centimètres. Only the hyperplastic form of goïtre can be successfully treated. In the greater proportion recurrence is observed, which makes it necessary to repeat the treatment. The effect of Baumann's thyro-iodine shows that iodine treatment has the same effect as thyroid treatment; the thyro-iodine contains the iodine in the natural form, and therefore gives results in small doses. With this treatment the author made experiments on dogs who had goïtres. He has found that the colloid degenerated gland is changed after treatment to normal thyroid tissue. It is the only example in physiology that by application of the secretion of a gland the hyperplastic gland is retransformed to normal tissue.

MAGNUS-LEVY has observed increase of secretion and excretion. The consumption of oxygen increased in one case fifteen per cent. Also in normal men the effect of the use of thyroid gland is the same. He had seen no good results in obesity.

BLACKSTEIN has observed that glycosuria in diabetic patients was increased by thyroid treatment, but that the general health was improved. The decrease of fat must be accredited to the influence of the gland on the glycogen of the liver.

HAUSEMANN remarks that struma in Basedow's disease has another histological character than the usual hyperplastic struma.

JULIUS SCHMIDT obtained good results in cases of dwarfs without myxædema.

MIKOWSKY has made experiments consisting in extirpation of thyroid and pancreatic gland. In his cases glycosuria arose.

HEUBNER has applied thyroid feeding in cases of rachitis. He has observed improvement of health without influencing the disease itself.

SCHULTZE has applied it in cases of tetany with good results; in cases of acromegaly without any result.

SCHUSTER recommends Baumann's thyro-iodine, because it has no disagreeable influence on the heart.

GOTTLIEB has found that the substances produced by Drechsel and Kocher contain no iodine at all. In spite of that, they are as efficacious as thyro-iodine. He therefore believes that the efficacious substance is an albuminate.

REHN has treated cases of cretinism with good result.

FAKSCH has obtained good results in myxædema and cretinism.

NOORDEN has often observed glycosuria in thyroid feeding. In Basedow's disease this treatment gives no result.

THOMAS treated a child with goitre and attacks of suffocation with the best result.

ROSENFELD had seen sometimes *post mortem* in diabetic patients unusual changes in the thyroid gland.

MULLER had seen progression in Basedow's disease during the treatment with thyroid gland. After ceasing the treatment he observed remarkable improvement.

ROOS prefers thyro-iodine to other specimens of the gland.

KAST remarked that in obese patients the gland is used without medical advice. He had seen disagreeable effects.

SENATOR confirmed the abuse of this treatment.

Michael.

ROYAL ACADEMY OF MEDICINE IN IRELAND.

March 13th. ("Brit. Med. Journ.," April 4.)

Stenosis of Trachea and Bronchi due to Syphilis.

Mr. F. A. NIXON exhibited a specimen showing a large gummatous mass surrounding the bronchi, and compressing the trachea to the extent

that the lumen was diminished to the size of a No. 4 catheter. Anti-syphilitic treatment produced no amelioration of symptoms, and the patient was slowly strangled by contraction of the mass during seven weeks. The larynx was healthy.

Dr. ROBERT WOODS had examined the patient and inspected the trachea as far down as the eighth ring, but could not make out the obstruction.

Dr. McWEENEY said that the tumour consisted of lymphatic gland tissue, caseous in the centre and exhibiting giant cells and a considerable amount of fibrous tissue. He considered the mass to be gummatous.

Ernest Waggett.

THE AUSTRIAN OTOLOGICAL SOCIETY.

Meeting, February 25th, 1896. ("Monatschrift für Ohrenheilkunde, March 1896.")

Dr. KAUFMANN. *A Case of Peri-Sinusal Abscess with Pyæmia cured by Operation.*

A girl, aged twelve, who had suffered for several years with ear disease, became affected with rigors of about half an hour's duration. On the 22nd January and on the two following days they recurred, and unconsciousness and vomiting supervened. There was loss of sleep, intense headache, and vertigo. She was taken into Prof. Politzer's wards in a somnolent condition; her temperature was 38.5; she had repeated vomiting. The right ear was normal; the meatus of the left ear was filled with thick offensive pus, and it was very narrow, so that the structures of the middle ear could not be recognized. The soft parts over the mastoid were normal, but at the point there was a certain amount of tenderness, as also in the region immediately below. The radical operation was at once proceeded with. The mastoid process was found hyperæmic, and at a moderate depth pus was met with in considerable quantity, along with moist, dirty, grey-green, cholesteatomatous masses. After a thorough clearance of the granulation and cholesteatomatous tissue in the attic and middle ear, the sinus was exposed in its whole course in the temporal bone. Around it was found thick pus, the wall of the channel was discoloured, but fluid blood was distinctly demonstrated in the interior. The sinus was therefore not opened; the posterior wall of the meatus was covered by the usual plastic proceeding, and an iodoform gauze bandage was applied. Next day the temperature was down to 37.9, there were no rigors, and steady and rapid improvement took place.

Dr. GOMPERTZ. *Congenital Abnormality of the Pharyngeal Orifices of the Tubes and Diverticulum in the Roof of the Pharynx.*

This was a patient aged twenty-three, and otherwise normally constructed. Both tubal orifices projected well into the naso-pharynx. From the upper part of each a ridge extended upwards to the roof of the pharynx, where both joined together and formed a sort of arch. It

appeared to consist of the same tissue as the tubal swelling. On the one side it seemed to roof over the choanæ, and behind it it left a kind of cavity. There had been no operative interference, and no evidence of syphilis : therefore it was looked upon as congenital.

Prof. POLITZER. *Osseous Defect in the Outer Wall of the Attic.*

The apertures in the attic remaining after the total destruction of the membrane of Shrapnell have been explained by some as due to the separation of the bone from its nourishing periosteum. This was possible only for the lower thin margin, but not for the thick upper part, which was well supplied by vessels from above. Walb's view, that a primary purulent osteitis of the tympanic margin was the cause of suppurative inflammation in the attic and its resulting caries, was not proved.

Prof. Politzer is of the opinion that after the laying bare of the margin of the notch of Rivini in the course of septic suppuration, pyogenic and saprophytic bacteria make their way into the cavities of the bone and lead to its destruction. The longer the suppuration lasts the greater is the extent to which the bone breaks away. In some cases, therefore, we find small, and in other cases very large, osseous defects after healing has taken place.

Prof. Politzer demonstrated the following preparations :—

1. A preparation from a subject aged seventy-five. Drum membrane entire. Shrapnell's membrane quite destroyed. Above the short process a pea-sized defect in the bone of the outer wall of the attic, through which a cholesteatoma had made its way from the meatus behind the bodies of the malleus and incus into the tympanum. In the deep parts of the attic there was a branched connective tissue membrane.

2. A preparation from a subject aged eighty-eight. The posterior half of the membrane was destroyed ; the anterior, thickened, was attached to the malleus, and in contact with the inner wall of the tympanum. Above the short process there was a large irregular defect in the bone, which extended into a part of the meatus, and exposed the mastoid antrum. There were dirty white cholesteatomatous masses in the attic and antrum, and the tympanic orifice of the tube was closed by connective tissue.

3. A preparation from an unknown subject with concave indrawing of the membrane, which adhered to the inner wall of the tympanum. There were extensive defects of the bone in the outer attic, and through these the head of the malleus could be seen freely exposed. Similar appearances, in which the body of the incus was absent, had been shown by Gruber and Gompertz.

4. A preparation with extreme thickening and pigmentation of the membrane. There was a defect in the wall of the attic, loss of the incus and head of the malleus.

5. Preparation from a tuberculous subject with carious destruction of the wall of the attic and of the tegmen tympani. There were numerous perforations through the dura mater, and death took place from meningitis.

6. Decalcified section through the tympanic cavity from a patient

aged thirteen, who had died of acute pleurisy. There was destruction of the membrane of Shrapnell, and of a portion of the wall of the attic, adhesion between the head of the malleus and the tegmen tympani, and between the tympanic membrane and the inner wall of the cavity, as had been observed by Hartmann in cases of Shrapnellian perforation.

Prof. GRUBER drew attention to the fact that some years previously he had, in the "Wien. Allgemeine Med. Zeit.," published a report on secondary dilatations in the temporal bone, with his theory as to the mode of their formation. He specially remarked that at the upper part of the inner margin of the outer meatus the drum membrane derived its tissues directly from the soft parts of the meatus, and that in this situation there was no annulus cartilagineus; that the blood vessels were more pronounced, and, therefore, also the structures of that part were in general more disposed to severe inflammation, and the bone was not protected by the annulus cartilagineus as it is in other parts, and was therefore also more easily broken down by suppuration. As a cause predisposing to infection of the antrum, he pointed to the structure of the portion of the squamous bone which joined the mastoid, which consisted of a more diploetic substance, and in which there were demonstrable cell spaces even immediately after birth, in which infection through the invasion of microbes could easily take place, and a breaking down of the bone in that way so much the more easily occur.

Dr. ALOIS KREIDL. *Demonstration of a Cat in which both Acoustic Nerves had been destroyed a year previously according to a Modification of Ewald's Method.*

The operation was effected in such a way that after the bulla was laid open the acoustic nerves, along with the facial, were destroyed by means of a Paquelin's cautery introduced from the foramen rotundum through into the internal auditory meatus. When the auditory nerve is being destroyed there is observed during the operation an outflow of cerebro-spinal fluid and horizontal nystagmus. At the end of a year the animal had the following symptoms, which were demonstrated: feeling its way about, audible (!) gait, persistent movements of the head, awkwardness in seizing its food, in running, and various disturbances of equilibrium, and loss of the galvanic reaction. Dr. Kreidl attributed these disturbances to the elimination of the organs of equilibrium in the internal ear.

Dr. FALT. *Post-mortem appearances in a Case of Mènière's Disease due to Leukæmia.*

This was a day labourer, aged sixty-six, who had never been seriously ill up to the winter of 1894, but at this time began to complain of headache, weakness, and extreme dulness. In June, 1895, he became unconscious after severe vertigo and tinnitus, and when he came to himself again found his hearing almost entirely gone. It was, however, only after fourteen days that a complete loss of hearing took place. Up to that time the patient was in bed, was frequently affected with attacks of vertigo, and in July, 1895, he was admitted into the hospital. A high degree of myelo-lienal leukæmia was diagnosed. [2,600,000 red to

600,050 of white blood corpuscles, about 1-4th, numerous single nucleated granular red blood corpuscles, enormous tumour of the spleen, enlarged liver, and extensive hæmatomata.] Inspection of the ear showed the drum membrane strongly indrawn on both sides, opaque, and with diminished light reflex. A tuning-fork, C², was not heard by the bones. In front of the left ear, and on the left mastoid process, C², C¹, and C were not heard, and in front of the right ear only the fork C², C¹, and C when very strongly struck, and then only for a much shortened time, while through the bones they were not heard at all. Very loud speech was only heard in immediate contiguity to the right ear, and on the left side there was complete deafness. A galvanic current of from fifteen to twenty milliampères failed to induce giddiness. Death took place on September 8th, and on section there was found myelolienal leukhæmia, with suppurating leukhæmic hæmatomata. Both temporal bones and the cerebral trunk were taken over for examination by Drs. Alt and Pincus.

These parts were treated according to the Weigert-Pal method, and showed the following changes:—In the intra-medullary course of the auditory nerve, both in the lateral and in the median root, there were in numerous places leukhæmic small-celled infiltrations, some minute, others very large. In particular the point of exit of the auditory nerve, where the two roots joined together, was extremely infiltrated, and the pia mater was slightly thickened as well as infiltrated with small cells. Moderate degeneration of the fibres of the nerve were here and there recognizable. The auditory nuclei, the posterior corpora quadrigemina, and the cerebellum showed no pathological changes; there were nowhere either hæmorrhages or remains of such.

The middle ear was absolutely normal; the appearance of the labyrinth, as verified by Drs. Kaufmann, Gruber, Politzer, and Weichselbaum, was absolutely negative. There was no evidence of such leukhæmic changes in the labyrinth as had hitherto been described, though very minute alterations could not be absolutely excluded on account of the extreme decalcification of the preparation. In the cases which have hitherto been published, the pathological changes were found either in the labyrinth (Poltzer, Steinberg, etc.) or the middle ear (Gradenigo). As regards changes in the auditory nerve there is no mention in these examinations, doubtless because no examination of the nerve—or at least of its cerebral origin—was made. This is therefore the first case in which leukhæmic infiltration of the auditory nerve has been found.

Seeing that in the whole of the literature no case of isolated auditory nerve affection has been described as giving rise to Ménière's disease, this case may be looked upon as unique in this respect. The fact that currents of from fifteen to twenty milliampères produced no galvanic vertigo in the patient would have to be explained, according to Polak's experiments, as due to a throwing out of gear of the co-ordinating apparatus.

Prof. GRUBER insisted that in the numerous sections which the reader had placed before him for examination no trace of Cortis's organ was present. Among all those which he had examined during his long

experience in which the labyrinth had been developed, he always found at least a trace of Cortis's organ ; but in these preparations the part was as if shaved away, leaving no traces, while even in the capsule of the labyrinth no abnormalities were to be found. The whole thing gave him the impression that in the decalcification Cortis's organ had been destroyed, and he thought it was unsafe to infer from the appearances found that the leukhæmic infiltration had in this case affected the auditory nerve alone, and had spared the structures of the labyrinth. At the same time the appearances in the auditory nerve were of the greatest interest.

Dr. ALT replied that he attached the greatest importance to the leukhæmic infiltration of the auditory nerve, and he had brought forward as a subsidiary matter the question as to whether this alone was sufficient to give rise to Ménière's complex of symptoms.

Dundas Grant.

SOCIETY OF HUNGARIAN OTOLOGISTS AND LARYNGOLOGISTS.

Fourteenth Meeting, November 21st, 1895.

("Monats. für Ohrenheilkunde," February, 1896.)

Dr. ZWILLINGER. *Laryngeal Paralysis resulting from Disease at the Base of the Brain.*

The patient was brought before the meeting of the Royal Medical Society on October 26th as a case of syphilitic basilar meningitis, and the appearance of the larynx was shortly described. Although the interesting symptoms had somewhat diminished under treatment, there was still sufficient remaining to bring before the society. The patient was a serving man, aged thirty-five. In March, 1895, there came on right-sided facial paralysis, which persisted without improvement in spite of iodide of potassium and electricity. Further there was absence of hearing for the watch in the right ear. Syphilis was denied, but in 1880 two warts had been removed from his penis which had formed during the course of a blenorrhœa. In 1884 he had pains in the right arm, for which a plaster of Paris bandage was applied without effect, but they ceased after twenty-five inunctions of mercury. On the 17th of October of last year the patient complained of general constitutional disturbance and headache; he was also unable to move the right eye outwards; had double vision, hoarseness, and regurgitation of food. On investigation there was found to be abducent paralysis, paralysis of the pharynx and larynx, anæsthesia of the trigeminal and auditory nerves of the right side; sight was normal; the fundus of the eye, apart from venous hyperæmia, showed nothing unnatural. Syphilis of the base of the brain was diagnosed, and treatment with inunction instituted. After the fourth injection the more recent nerve paralysis began distinctly to diminish, and at the present moment the paralysis of the sixth and of the right

half of the palate has disappeared, and the laryngeal paralysis is distinctly less. At the first examination there was found paralysis of the right half of the palate and obliquity of the uvula. There was a diffuse redness of the palato-glossal arch, both on the right and left sides, and small epithelial erosions of the size of a pin's head. The right half of the larynx remained on phonation completely fixed, a slight movement of the right arytenoid cartilage being all that was seen. The vocal cord was concave and absolutely abducted. On phonation the left side moved freely and extended beyond the middle line. It could, therefore, be decided that there was complete paralysis of the muscles supplied by the right laryngeal nerve. Sensibility was intact; after the fourth inunction the right half of the larynx could move to a slight degree towards the middle line, and the arytenoid cartilage moved more freely than before. After the sixth or seventh injection the degree of mobility was greater, though still imperfect, and the closure of the glottis incomplete on account of the right vocal cord still remaining concave. The additional observation was made that the glottis occupied an oblique position.

This observation has considerable interest in relation to the innervation of the crico-thyroid muscle. It appears that the healthy vocal cord was on a higher plane than the paralyzed one. On the other hand, in phonation one is struck by the circumstance that the movement of the right side is not so prompt as that of the left. The right vocal cord does not yet undergo normal extension. When last seen the glottis was still somewhat oblique, and the voice slightly hoarse. The mobility and sensibility of the palate had become normal, and the patient had already had twenty-six inunctions.

Dr. NEMAI agreed with Dr. Zwillinger that the left vocal cord was healthy and the right one paralyzed, but as regards the difference in level he thought the healthy one was somewhat deeper and the paralyzed one somewhat higher. This circumstance agreed with experiments he had made upon animals, which indicated absolutely that it was the right crico-thyroid muscle which was paralyzed.

Dr. BÖKE was not quite certain with regard to the history, but he was unable to explain the facial paralysis in this case on the hypothesis of a central origin, because in central affections the facial paralysis affects the opposite side from the auditory paralysis. He was much more inclined to consider that there was a local process present in the ear which gave rise to the auditory paralysis, and he was of opinion that the facial paralysis was peripheral and not central.

Dr. KREPUSKA inquired whether the condition of the heart had been examined as regards retardation or irregularity of pulse. These clinical symptoms were of great importance in the study of a central disease. He thought it probable that there was some proliferation of tissue pressing upon the auditory and facial nerves where they ran side by side. The auditory anaesthesia was not complete. The patient suffered at the commencement from noises in the ear and became deaf in the right ear. At this moment he did not hear the watch at all. Weber was positive left, Rinné positive right, and the appearance of the tympanum absolutely

negative. With such symptoms, and with due recognition of the fact that the facial paralysis is on the same side, there was little doubt that the disease was situated where the seventh and eighth nerves run together—that is to say, between their exit from the medulla oblongata and the external extremity of the internal meatus. The simultaneous affection of the vagus nerve would indicate that the disease was not situated in the internal auditory meatus, but at the point of exit of the nerves from the medulla. These observations would require to be confirmed by the conditions found at an earlier stage and the course of the disease.

Dr. BÖKE mentioned that cases of syphilis of the brain had been published, in which exostoses and tophi exercised pressure upon the seventh and eighth nerves in their common course in the internal meatus.

Dr. SZENES thought that perhaps the disturbances of taste described in this case might indicate that the disease was situated near the periphery. He thought it unlikely that the disease would be in the cerebellum, where a tumour might cause disease of the auditory and facial nerves at one and the same place, because of the distinct improvement in the facial paralysis which had followed injections, although the auditory anæsthesia still persisted. The negative appearance of the tympanum would not exclude the possibility of a sclerotic process, which might gradually have led to the deafness.

Dr. ZWILLINGER agreed that the right crico-thyroid muscle was paralyzed, but he differed from Dr. Nemai's opinion that the paralyzed cord lay on a higher level than the other one. He had followed the case from the beginning, and had seen it very frequently, so that he was in a better position to pronounce as to the difference in level, which had become less under treatment. He had attributed the deafness to a basilar origin, because the other paralyses were unquestionably of such.

Dr. NEMAI still insisting that the paralyzed vocal cord was the higher one, Dr. ZWILLINGER requested those present to examine the patient and decide upon this question; whereupon Drs. Irsai and Polliak expressed their opinion that the normal vocal cord was the higher of the two.

Dr. STIPANITS. *Removal of the Inferior Turbinated Body.*

An illustrative case was described. He generally uses a chisel—sometimes a bone forceps or scissors—and carries out his operation in the following way:—After irrigation of the nose with a weak solution of sublimate and anæsthetization with ten per cent. of cocaine the turbinal is removed, in whole or in part according to the necessity. Bleeding, which is slight, is checked during the operation by means of a solution of alumnol. After the operation the nose is plugged with strips of iodoform gauze, which are changed two or three times a day. Healing takes place in eight or ten days, even in cases in which portions of bone are removed. He carries out this operation in cases in which he wishes to reach a place which is inaccessible on account of the presence of the turbinal, especially in extreme hypertrophy of this body, when milder measures are unsuccessful, and where it is necessary to attain an immediate result. When an operation is necessary he is strongly opposed to the use of the galvano-

cautery, because he cannot see that in cases in which cauterization is applicable his operation is not applicable; and when he has to make a wound he considers it better surgery to do it with a sharp instrument than with a cautery, which, in the nose, causes a wound which cannot heal without suppuration. Further, he thinks it better practice to get the patient well in eight or ten days, even if the operation is more energetic, than to lengthen it out over two or three months. He claims the following advantages for his operation:—(1) The removal is radical, and its amount can be carefully checked; (2) the patient is relieved from his trouble at one sitting; (3) healing takes place with greater rapidity than after any other form of operation.

Dr. POLIAK thought that the operation was very seldom required—indeed, only in cases where the turbinated body prevented access to deeper parts. Even here there was a danger of the hæmorrhage concealing the field of operation, so that the whole proceeding cannot be carried out at once. Even in such cases he thought that the cold snare was more effective. In the treatment of hypertrophy the galvano-cautery would not be displaced by this operation, if only because, although it is necessary that the patient should have enough air through the nose, he must not have too much; and in the use of the chisel he was afraid that the nasal passage might be made too wide, and that certain morbid troubles might follow which could not be disregarded. He thought it a great disadvantage that after the operation the nose had to be plugged for several days.

Dr. STIPANITS replied that with the chisel he could open the nasal passage as much or as little as he liked.

Dr. NEMAI. *Laryngeal Cicatrices following Severe Tuberculous Destruction.*

The case demonstrated showed what a favourable course was sometimes taken by tubercle of the larynx. The pulmonary disease, which was of an advanced kind, had come to a standstill. The laryngoscope showed considerable loss of substance on the epiglottis and the right aryepiglottic fold, as also of the right vocal cord, which was not ulcerated but irregular. The losses of substance were such that the insufflation tube, or the brush, could be passed through them into the larynx. Their floor was throughout formed of firm cicatricial tissue. At the same time the right arytenoid cartilage was infiltrated, so that it could not be said that the tuberculous laryngitis was completely cured. The voice was hoarse, but otherwise fairly good; there were no signs of syphilis; and the larynx had been treated in the country by means of iodoform insufflation.

Dr. ZWILLINGER considered the prognosis of the case very unfavourable in spite of the cicatrization, because not only the arytenoid cartilage but the tissue surrounding it were infiltrated. It was interesting to observe that a part of the cartilage was lost—a condition which was seldom found in such tuberculous processes. The cicatrization was not a very uncommon event, and he had himself had a case of severe tuberculous infection of the epiglottis which was treated with iodoform and morphia insufflations, and settled down in about half a year.

Dr. SZENES. *Mastoid Caries following Influenza. Demonstration of the Patient.*

The patient was a schoolboy, aged fifteen, who took ill on the 5th of September with headache and general debility, and had a temperature of from 39 to 39.5. Next day there were severe pains in the upper part of the left ear, and on the following day also in the right one. On account of this Dr. Szenes was called to see the patient on the 8th of September. There was a clinical picture of acute median otitis, diffuse hyperæmia of the tympanic structures, which persisted in spite of the instillation of fifteen per cent. carbolic glycerine, and suppuration appeared next day in the right ear. Previous to this the patient had been somewhat delirious, but only for a short time. With the exception of Trousseau's lines there were no further symptoms of meningitis. The ears were syringed every two hours with a lysol solution; an ice-bag was applied to the head and to both ears. On the 12th September the pyrexia had quite disappeared. In spite of this the other symptoms of influenza, especially the bronchitis, persisted. On the 18th of September there was considerable dulness of hearing and bilateral otorrhœa. There were perforations in the postero-inferior segments of the tympanic membranes, but the mastoid processes were normal.

At the end of a month the patient was seen again. He reported that the otorrhœa from the right ear had stopped for three weeks, and that the hearing power had become normal. On the other hand the left mastoid region was red and swollen, and deeply in the left external meatus was seen a little thick pus, after the removal of which the perforation in the postero-inferior segment of the membrane was exposed. Ice applications were made to the left ear and the swelling diminished, but there still remained a slight discharge. The patient left off the applications, and on the 8th November the left mastoid was again swollen, and the ice applications brought about no diminution of it. The patient was therefore taken into hospital for purposes of operation.

On admission the left auricle projected somewhat forward; the epidermis of the swollen mastoid was reddened, and in the middle of the swelling there was a fluctuating surface; and percussion, as well as Okuneff's auscultation method, indicated that the mastoid process was diseased in almost its whole extent. Hearing power was normal on the right side, but on the left side for the watch it was *nil*; low-toned tuning-forks were only heard by bone conduction, high ones by air conduction; also Weber was positive, Rinné on the left side negative.

After division of the soft parts, the periosteum, which was thickened and more adherent than normal, was raised with the elevator, and after the gouging away of the whole cortex there was found an extensive caries of the bone. The antrum contained a little thick pus and fungating granulations. After complete evacuation of the diseased parts the whole wound cavity was plugged with iodoform gauze, and the patient, after a somewhat restless night, next morning was so comfortable that he got out of bed. The first dressing was changed five days later; the ear was completely dry, and the hearing power so much improved that the watch-tick was perceptible at five centimetres. Rinné was positive for high-pitched

tuning-forks and negative for very deep ones only. On the 19th November the dressing was again changed, and the boy was made an out-patient. When shown to the society he felt quite well; his appearance became better from day to day, and there was no doubt he would be well in a few weeks. The enormous destruction of the mastoid bone showed how severe the effects of influenza might be.

The case showed that influenza might, so to speak, commence in the external meatus; and it was curious, if the tympanic disease was similar on both sides, that in spite of identical treatment one ear quickly recovered, whereas in the other the disease extended to the mastoid. Notwithstanding the further extension of the morbid process there was feverishness only in the first few days of illness. Before the operation there was tenderness as well as spontaneous pain in the left mastoid process, but after it the wound was free from tenderness even on firm pressure.

Dr. KREPUSKA'S experience had been that influenzal suppurative median otitis very seldom led to affections of the mastoid unless there had been some error in the treatment. It was to be noted that in the case described the retention of pus which had existed during the pause in treatment had given rise to the mastoid affection which called after some weeks for operative treatment.

Dr. BÖKE pointed out that in this case the origin of the trouble was to be attributed to influenza, which can cause otitis media and extend further, and the limits of this extension could never be determined. As a rule it confined itself to the tympanum, and only rarely extended to the antrum. His opinion was, that under proper treatment recovery in influenzal otitis could be attained without operation, and that in cases in which it extended to the antrum there had either been some neglect on the part of the patient or some error in treatment had been made. The results in this case were extremely satisfactory.

Dundas Grant (Trans. and Abs.).

SECOND PAN-AMERICAN MEDICAL CONGRESS.

To Meet in the City of Mexico on the 16th, 17th, 18th, and 19th of Nov., 1896.

ENROLMENT.

Art. 1. In order to be properly enrolled, each member of the Congress will pay to the Treasurer thereof, in the City of Mexico, the sum of five dollars gold.

GENERAL SESSIONS.

Art. 3. The opening session, which will be of a solemn character and presided over by the Supreme Authority of the nation, besides being attended by the members of the Congress, will also be attended by the members of scientific societies.

Art. 8. No discussions will be held in the general sessions.

SESSIONS OF THE SECTIONS.

Art. 9. These sessions will be held from 9 to 12 a.m. and from 3 to 5 p.m., in the places that may be designated by the Organizing Committee. They shall be presided over by the President of each section, alternating with the Vice-Presidents of each one of the nations that are represented in the respective sections.

PAPERS, EXTRACTS THEREOF, AND DISCUSSIONS IN THE SESSIONS OF THE SECTIONS.

Art. 15. All papers will be presented in writing.

Art. 16. Each author will forward to the Secretary of the Organizing Committee in the City of Mexico, and before the 1st day of August of the present year, an extract not exceeding 300 words of the paper to be presented by him. These extracts will be printed in English, French, and Spanish, and will be distributed to the members of the Congress before the session in which they are to be read.

Art. 17. No paper will be announced which is not accompanied by this extract ; but the authors who comply with these conditions will have a right to have their work published intact in the "Transactions" of the Congress.

Art. 18. The reading of the papers in the sessions must not last more than twenty minutes ; when the papers are so long that they cannot be read within that time, the authors will give extracts from them, either in writing or by speech ; but they will be published intact in the "Transactions" of the Congress and in the language in which they have been written.

Art. 19. The extracts referred to in the preceding article will be delivered at the same time as the papers to the Secretary of the section to which they pertain.

Art. 20. The members of the Congress who may take part in the discussions in any section will present their speeches in writing at the termination of the sessions to the respective Secretaries of such sections, and they will also be published in the "Transactions."

Art. 21. The papers which have been announced for reading in the order of the day in each section will serve as subjects for discussion. In such discussions no speaker will be allowed to speak more than once and for five minutes ; but the author of the paper under discussion will be allowed to reply, if he considers it necessary, in one sole speech, which will not go beyond ten minutes.

Dr. MANUEL CARMONA Y VALLE.
Dr. RAFAEL LAVISTA.
Dr. EDUARDO LICÉAGA.

WESTERN OPHTHALMOLOGICAL, OTOLOGICAL,
LARYNGOLOGICAL, AND RHINOLOGICAL ASSOCIATION.
(AMERICA.)

THIS Society was founded on April 9th, in Kansas City, Mo. The following gentlemen were elected as officers for the ensuing year:—Dr. ADOLPH ALT, *President*; Drs. FRYER, PIPINO, and MARTINDALE, *Vice-Presidents*; Dr. DAYTON, *Treasurer*; Dr. HAL FOSTER, *Secretary*. After the meeting for general business numerous papers were read, and we trust to be able to give abstracts of them later; and we take the opportunity of wishing this new Society success. St. Louis, Mo., was selected as the place of meeting for 1897.

ABSTRACTS.

DIPHTHERIA, &C.

Blumenfeld (Bruck). — *Contribution to Serum Treatment of Diphtheria.*

"Wiener Klin. Woch.," 1896, No. 18.

OF two hundred and twenty-nine cases treated with serum twenty died—eight and three-quarters per cent.; of forty-eight cases treated with serum eleven died.

Michael.

Dräer (Konigsberg).—*Bacteriological and Clinical Diagnosis of Diphtheria.*

"Deutsche Med. Woch.," 1896, No. 18.

IN one hundred and ninety-three cases of clinical diphtheria Loeffler's bacillus was found in one hundred and fifteen. In fifty-two cases of angina the bacillus was found in nine. Experimental injection of animals is only performed in cases with pseudo-diphtheritic bacillus. Six out of twelve cases gave positive results.

Michael.

Flick, Lawrence F. (Philadelphia).—*Calomel as a Specific for Diphtheria.*

"Med. News," April 25, 1896.

THE author advocates the administration of calomel in minute doses—one sixty-eighth to one one-hundred-and-twentieth of a grain every fifteen minutes—in cases of diphtheria, keeping this up day and night until the disease has disappeared. The result in his hands has been exceptionally satisfactory, as since adopting this treatment, two years ago, he has not had a single fatal result or a serious complication. He concludes by remarking that he has not seen a very large number of cases.

StGeorge Reid.

Kassowitz (Wien).—*Statistics of Antitoxin Treatment.* "Wiener Klin. Woch.," 1896, No. 17.

ANSWER to Paltauf. The statistics of Trieste prove that the diphtheria mortality in this city has increased since the introduction of antitoxin. In spite of the fact that in nearly all cases this treatment is used, Trieste had in 1895 a mortality from

diphtheria of 17 per cent., Berlin 5·3 per cent., and Paris 1·7 per cent. The author concludes that it is not possible to use the statistics to prove the value of antitoxin. *Michael.*

Lahs (Marburg).—*Antitoxin Treatment.* “Marburg Elwers,” 1896.

THE author has treated diphtheria for fifteen years with chlorate of potash and hydrotherapy, and has not had a death during this time. He does not believe that the antitoxin has any great effect. If the experiences of practitioners and not only of clinicians were taken, it would be found that their mortality would be less than the fifteen per cent. obtained by antitoxin. *Michael.*

Martin, Sidney.—*Treatment of Diphtheria by Antitoxic Serum.* “The Clinical Journ.,” April 15th and 29th, 1896.

SEVENTY-FIVE cases have been treated at University College Hospital in 1895. In sixty-five, out of seventy examined, the bacillus diphtheriæ was found. Intravenous injection was employed in two tracheotomy cases, and did well. Rashes occurred in fifty per cent. of the cases, and one patient had pain in the knee-joint and slight swelling of the wrists. In thirty-one pharyngeal cases the membrane disappeared in two to six days in seventeen cases, in eight cases in seven to ten days, in four in eleven to thirteen days, and in two it persisted for twenty-three days. The local treatment was to spray the throat every four hours; a solution of bicarbonate of soda (20 grs. to the ounce) and a corrosive sublimate solution (1—2000) being employed alternately. The total mortality, twenty-eight per cent., was lower than in the best of the previous four years, and in cases admitted before the fourth day it was only seventeen per cent.

More cases of paralysis may follow antitoxin treatment because more severe cases have been saved from death and life prolonged.

The bacillus may persist long after the membrane has disappeared, and in one case a pure cultivation was obtained from the throat thirty-five days after.

The dose of antitoxin should not be reckoned by the number of cubic centimètres injected, but by the number of normal units the serum contains. The total dose ought not to be less than 4000 normal units. It is important to inject the serum at the earliest possible opportunity, for, even if the case is not diphtheria, you can do no harm. *Middlemass Hunt.*

Paltauf (Wien).—*Remarks on the Case of Sudden Death of a Child following a Preventive Injection of Antitoxin.* “Wiener Klin. Woch.,” 1896, No. 16.

SOME weeks ago the child of Prof. Laugerhaus in Berlin suddenly died, after an injection of heilserum. The nurse of the child had a non-diphtheritic angina; the child died suddenly after a prophylactic injection given before the diagnosis was verified. The *post-mortem* examination showed no cause for the sudden death. The author does not believe there is any connection between the injection and the death. He reports the good results of the treatment, and believes it unjustifiable for the public press to irritate the public by such communications. *Michael.*

Rubens (Gelsenkirchen).—*Antitoxin and Calomel in Diphtheria.* “Therap. Monats.,” 1896, No. 4.

THE author recommends combination of the heilserum treatment with internal use of calomel, and brushing with Loeffler's solution. *Michael.*

Soerensen (Copenhagen).—*Experiments with Serumtherapy in Diphtheria in the Blegdarn Hospital in Copenhagen.* “Ther. Monats.,” March, 1896.

OF fifty-seven cases treated with serum seventeen died; of forty-six cases treated without serum fifteen died. The author gives details of the cases and concludes

that there was no difference with antitoxin. But hæmorrhagic nephritis was more frequent in the cases treated with serum, and paralysis and hæmorrhages are more often observed in the cases treated with serum. The croup cases treated with serum died without exception. Only the slight cases treated with it gave good results.
Michael.

Wartmann (St. Gallen).—*Diphtheria in the Canton St. Gallen*. "Courszbl. für Schweizer Aerzt.," 1896, No. 9.

THE author gives the statistics and concludes as follows: The diphtheria in the Canton St. Gallen shows a remarkable increase, especially in the city of St. Gallen. Severe epidemics are rare; the disease has, as in Basel, an endemic character with progressing intensity. The mortality is not very high. The author hopes that by antitoxin treatment and by hygiene this will be improved.
Michael.

MOUTH AND PHARYNX.

Campbell, James T. (Chicago). — *Pharyngo-Mycosis Leptothrica*. "Med. News," April 4, 1896.

THE author refers to the numerous bacteria of the mouth and their beneficent character, but points out that the leptothrix buccalis under certain circumstances can give rise to the above disease in the pharynx. He describes the parts affected and the peculiar white, tough, adherent colonies standing out as excrescences on the mucous membrane, and points out for the purpose of differentiation the very slight constitutional disturbance accompanying the attack, the symptoms chiefly complained of being dryness and irritation in the throat, with slight irritable cough. He advocates the careful application of chromic acid on a fine probe to the interior of the crypts as the treatment he has found most satisfactory.
StGeorge Reid.

Clark, B. F. R. (Philadelphia).—*Hypertrophy of the Lingual Tonsil, with Report of Seven Cases*. "The Philadelphia Polyclinic," Mar. 28, 1896.

THE author deals with the history of the disease, and refers to its anatomical and physiological characteristics; he points out that it is a disease of adult life, and that sex seems to be an etiological factor, women suffering more frequently than men; that while it is often set up by exposure to cold or wet, he has not found that prolonged use of the voice, as in the case of public singers, renders them more susceptible. He recommends the application of glycerine of iodine, or iodide of potassium, and in obstinate cases cautery by chromic acid.
StGeorge Reid.

Kolpik, H.—*The Acute Retropharyngeal Abscess of Infancy and Childhood; Revised Classification and Treatment based on the Etiology*. "New York Med. Journ.," April 4, 1896.

THIS paper is founded upon seventy-six cases seen during a period of six years, and the anatomical relations of the parts and glandular distribution are reviewed. The author then classifies the abscesses as follows:—(1) Acute: (a) those pointing internally; (b) those pointing internally and externally; (c) those forming chiefly as an external tumour. (2) Chronic tuberculous. (3) Septic (as after scarlet fever), which burrow and may burst into one of the various structures of the neck. The term idiopathic is discarded, and Lallette's investigations as to the lymph glands in the retropharyngeal system are alluded to, and the connection between the

abscess and angina faucium pointed out; also of nasal affections and *la grippe*. The four chief micrococci found are streptococcus brevis (*a* and *b*) pharyngis, streptococcus longus (*a* and *b*) pharyngis. The disease is in its acute form one of infancy, and most frequent during the first two years of life. The same internal incision as that advocated by Bokai is advocated, and is certainly preferred by the author in most cases; external incision being used when there is deep suppuration of the cervical glands with primary abscess behind the pharynx. *R. Lake.*

Lape, Esther.—*Antiseptic Treatment of Scarlatinous Angina by Resorcin-Glycerine.* "Thèse de Paris," 1896.

THE author relates twenty-five cases of scarlatinous angina treated with much benefit by painting with glycerine and resorcin; one in ten to one in twenty. She employs that medicament in every case of angina, serious or mild. The application is not painful, not caustic, diminishes the duration of the angina, and prevents the secondary infectious complications of that disease. *A. Cartaz.*

Moreau.—*Contribution to the Study of Peripharyngeal Abscesses.* "Thèse de Paris," 1896.

EXHAUSTIVE description of the pharyngeal lymphatic glands, and of the symptoms of various forms of pharyngeal abscesses, retro or lateral. The author believes these abscesses are a phlegmonous adenitis, a consequence of direct local infection by tonsils or general infantile diseases. *A. Cartaz.*

Taylor, Seymour.—West London Medico-Chirurgical Society, March 6, 1896. "Brit. Med. Journ.," March 14, 1896.

THE author showed a man of thirty who had recovered from a severe attack of *Lutwig's Angina* under the use of potassium iodide. No incisions were necessary.

MR. BIDWELL showed a case of *Salivary (Parotid) Fistula* cured at a second attempt by setting up considerable suppuration.

MR. BIDWELL also showed an example of *Adenoma* situated near the tip of the tongue in a girl of fourteen. Surface vesicles, due to lymphatic obstruction, were to be observed. *Ernest Waggett.*

Tsergin (Kasan).—*Anastomosis in the Tongue.* "Archiv. für Anat. und Physiol.," 1894.

THE sympathetic nervous system gives fibres to the tongue by the superior cervical ganglion. The greater part of the vaso-constrictive fibres come from the hypoglossal nerve, the other from the plexus lingualis. *Michael.*

Waldvogel.—*Bacteriological and Pathologico-anatomical Researches of Infectious Pharyngo-Laryngitis.* Inaugural Dissertation, Gottingen, 1894.

THE author found in four cases examined that the inflammation was caused by streptococcus. *Michael.*

NOSE AND NASO-PHARYNX.

Baldewein, Rudolf (Rostock).—*The Rhinology of Hippocrates.* "Zeitschrift für Ohrenheilk.," Bd. 28, Heft 2.

THE author has collected from the works of Hippocrates all remarks relative to rhinological questions, as well as anatomical, pathological, and therapeutical. He has found that where the author was obliged to make hypotheses, errors were

frequent ; but concerning the diseases of visible parts, we find exact clinical observation and an admirable therapy. The exact descriptions of different forms of polypus show the author knew of hypertrophy, of deviations, and of mucous polypi. For removing the neoplasms he had used both ligature and the sponge method known under Voltolini's name. The methods of operation are illustrated by instructive woodcuts. Also, fractures of the nasal bones are treated by methods similar to the most modern.

Michael.

Laurens, G.—*Nasal Lesions and Ocular Reflexes.* "Ann. d'Oculistique," April, 1895.

GENERAL review, in which Laurens explains the various reflex manifestations of the eye due to nasal disease.

1. Reflex sensory troubles, general or special (neuralgia, photophobia, amblyopia).

2. Troubles of excito-sensory nerves through irritation of the nasal branchi of the trigeminal (lachrymation, epiphora).

3. Reflex disorders of motion (blepharospasms, strabismus, asthenopia).

4. Nutritive and vaso-motor disorders in divers parts of the eye (conjunctivitis, iritis, glaucoma, etc.).

He discusses the pathogenic explanation of these disorders—the nervous reflex theory adopted by Hack and Berger, and the circulatory by Ziem. He himself believes that in some cases the troubles must be the result of secondary microbic infection.

A. Cartaz.

Myles, R. Cunningham (New York).—*Disease of the Accessory Nasal Sinuses, with Suggestions regarding their Treatment.* "Med. News," Mar. 28, 1896.

THE article deals with the difficulty of diagnosis in these cases and refers to the valuable aid given by the electric lamp. The author points out the importance of recognizing the altered character of the secretion poured out by the cells and its position, as indicating the diseased area ; he advises irrigation at first through the natural openings, but where there is a considerable secretion of offensive pus recommends that a free artificial opening should be made without delay. He classifies the pathological conditions met with under the head of catarrhal, polypoid, odontic periostitis, atrophic rhinitis and syphilitic, and deals with the treatment of each form, consisting principally of cleansing, antiseptic drainage, curetting, and packing, and concludes by giving the history of twenty cases which had come under his observation.

StGeorge Reid.

Skier.—*Researches on Deviation of the Nasal Septum.* Inaugural Dissertation, Rostock, 1895.

REPORT on the examination of one hundred and seventy-two skulls of the Rostock anatomical collection. The results confirm those of Zuckerkandl.

Michael.

Tissier, P.—*Nasal Syphilis.* "Gaz. des Hôp.," Feb. 15, 1896.

GENERAL and critical review. The author studies the syphilitic manifestations of the skin, the mucous membrane, primary, secondary, and tertiary lesions, and the various forms of hereditary syphilis, of early or late development.

A. Cartaz.

Wright, G. A.—*On Certain "Dermoid" Cysts.* "Brit. Med. Journ.," April 18, 1896.

THE author draws attention to dermoid cysts containing hair, which occur about the bridge of the nose in the middle line. He also describes two cases in which ulceration [? tubercular] was found associated with auricular fistulæ.

Ernest Waggett.

LARYNX.

Bergengrun.—*A Case of Diaphragm in the Larynx.* Meeting of the Medical Society of Riga, Oct. 4, 1895.

A DIAPHRAGM occluding nearly the whole larynx in a patient of forty-three. The neoplasm had been growing fifteen years. The author cut the membrane and treated it for a short time with Schroetter's tube, with a rapid cure. Syphilis could be excluded. The author believes that it was caused by congenital causes.

Michael.

Bianchi and Massei, F.—*A Case of Hystero-Traumatic Aphonia.* ("Safera un Caso d'Afonia Istero-Traumatica.") "Arch. Ital. di Lar.," Oct., 1895.

THE patient, a woman of about twenty-five, belonged to a neuropathic family, but had no personal history of nervous disease, and presented not the least manifestation of hysteria. Being subject for some time to hoarseness and interference with breathing, she consulted Massei, who found on the right vocal cord a tumour, which was removed without difficulty; but the patient, less preoccupied with the laryngeal tumour than the hoarseness, retained after the operation a complete aphonia. At the end of some months, and after cicatrization of the seat of the implantation of the growth, the latter reappeared and soon developed in an alarming manner. The aphonia was naturally attributed to the growth, and a second operation was performed; nevertheless the aphonia persisted. At this time the idea of the hysterical nature of the aphonia suggested itself; but as all the means employed (among others electricity) gave no result, Massci, with the concurrence of Prof. Bianchi, concluded that there was hystero-traumatic paralysis of the vocal cord. Without deluding themselves as to the difficulties of the treatment—naturally more serious than in a case of simple hysterical aphonia—they tried successively suggestion while awake, local and general faradization, galvanization of the vagi, the recurrences, and the vocal cord, hydropathy, etc.; but none of these methods caused the least improvement. Examination of the patient gave no basis for diagnosis; no paræsthesia, no contraction of visual field, no abolition of reflexes, such as one often meets with in hysteria. Moreover, the patient displayed none of the stigmata of hysteria on the moral side; she was quiet, moderately preoccupied, not desirous of speaking of her trouble, and in no way inclined to exaggeration.

It was then decided to give hypnotism a trial. The first attempt to put her to sleep having failed, a second hypnotic *séance* was held, and a perfect somnambulistic sleep was obtained, during which they suggested to the patient that she would speak aloud for one hour—a result which was in effect obtained. At the end of one hour the aphonia returned. During subsequent *séances* the suggestion referred to periods of time of increasing duration. Ultimately they made the suggestion that the cure was complete and final, as was realized in effect. Since then five months have passed without manifestation of aphonia or other nervous complications.

The authors arrive at the conclusion that a surgical operation may sometimes disclose a constitution hysterical and neuropathic, and bring on an hystero-traumatic neurosis where the psycho-physical stigmata of hysteria are absent. They insist that hypnotism may be turned to account in such a case, not merely as a therapeutic agent, but also with a view to diagnosis, by bringing to light the close analogy, if not the identity, which exists between hysteria and traumatic neuroses.

"Arch. Inter. Lar., Otol., and Rhinol." *M. M. (Waggett).*

Guément.—*Post-Influenzal Paralysis of the Velum, Pharynx, and Larynx.*

NOTES on the case of a man, aged fifty-five, who had a mild attack of influenza. Three weeks later, hoarseness, dysphonia, and dysphagia gradually appeared. The pharynx was paralyzed; reflexes abolished; the sensibility considerably diminished. In the larynx, paralysis of adductors complete on the left; incomplete on the right. The paralysis remained for three months, and was cured by electricity and internal treatment.

A. Cartaz.

Semon, Felix.—*A Clinical Lecture on Malignant Diseases of the Larynx.*

"Clinical Journ.," Feb. 26, 1896.

THE etiology of cancer of the larynx is involved in the same uncertainty as that of malignant disease elsewhere. It is always primary, never secondary or metastatic, or attacks the larynx by contiguity only. The reason of this is the lymphatics of the larynx do not freely anastomose with those of their neighbourhood. Sarcoma of the larynx is very rare; and of carcinomata, epithelioma is by far the most common. The male sex is infinitely more liable than the female, for some unknown reason. Smoking and professional voice-use do not account for the difference. Enormous majority of cases occur between forty and seventy years of age, the extremes in Dr. Semon's experience being twenty-six and eighty-three years of age.

In intrinsic disease the cords are most frequently first affected, and the one invariable symptom present is hoarseness. This may last for months, or even a year or more, without a single other symptom intervening. Pain does not depend on the disease *per se*, but on the implication of the sensory nerves, and may never occur up to the time of death. Slight and repeated hæmorrhage is very characteristic, but often there is none. Malignant disease may commence locally as a simple congestion, followed by tumefaction, or may assume at once the form of diffuse tumefaction in any part of the larynx. It may begin as a globular, sessile, nodulated mass, or present the characters of a simple papilloma or fibroma. To distinguish simple from malignant growths, remember the tendency of benign growths to localize themselves in the anterior parts of the cords, while malignant growths appear on the posterior parts, or on the interarytenoid fold, the epiglottis, or aryteno-epiglottidean folds. Again, in simple papilloma the apices are more or less rounded, while in malignant disease the individual projections of the growth are very much pointed, and the growth is much whiter in colour. Impaired mobility of the cord need not always be present in cancer, for the disease may be of a superficial character at first. The average duration of life in cancer of the larynx is between two and three years. The cases most favourable for operation are those in which there is a definite tumour of one cord. Thyrotomy, with removal of all the soft parts on the affected side, has yielded in Dr. Semon's hands fifty-eight per cent. of lasting cures. Where the disease is too advanced for thyrotomy, a part or half of the larynx must be extirpated. The cases most suitable for this operation are those in which the disease is situated on the front parts of the larynx. In cases which do not permit of radical operation early tracheotomy is the best palliative.

Middlemass Hunt.

Thompson, S. A. (Cincinnati).—*Sarcoma of the Larynx.* "Med. News," Mar. 28th, 1896.

THE final report of a case operated on in October, 1895. After a temporary improvement, recurrence took place in November, and at an operation undertaken for removal of the growth it was found impossible to remove all the affected glands, extending as they did under the sterno-clavicular articulation. The tumour was

removed and measured three inches by two in width. The patient rallied rapidly after the operation, but died on December 21st from recurrence in the lungs.

St George Reid.

THYROID, NECK, &c.

Baumann (Freiburg-i.Br.).—*On Thyro-iodine*. "Münchener Med. Woch.," 1896, No. 14.

THYRO-IODINE found by the author in thyroid glands can be obtained by treating the gland with sulphuric acid or by artificial peptonization. It is insoluble in water and ether, but soluble in alcohol and alkalis. It contains ten per cent. of iodine. An analogous specimen, iodo-gorgo-acid, has been found in Gorgonia, Carolina. Thyro-iodine is combined in the gland with albumen and globuline. Roos has used thyro-iodine in parenchymatous goitres, and has obtained the same results from the use of fresh thyroid gland, but more rapidly. The quantity of iodine found in a gland varies from three to seven and a half milligrammes. Experiments prove that iodine is necessary for the existence of the animal body, and it is possible also for the existence of plants; its presence is indispensable to sea plants, in which it is found in great quantities. The author also has found iodine in calf thymus. It seems that in enlarged thyroids, and especially in colloid goitres, the quantity of iodine is much less than normal.

Michael.

Fischer (Wien).—*The Relation between the Thyroid Gland and the Female Sexual Organs*. "Wiener Med. Woch.," 1896, Nos. 6, 7, and 8.

IN the time of the Roman Empire it was believed that relation existed between thyroid gland and female sexual organs, especially that the circumference of the neck increased after defloration. Goitre is often observed in females at the age of puberty. The thyroid gland increases and goitres most develop at this time. Also during menstruation a swelling of the gland is often observed. The same swelling has been observed by the author in pregnancy. Basedow's disease and myxœdema are influenced unfavourably by gravidity. By labour the gland sometimes increases, and if there is a goitre the swelling may be sufficient to necessitate artificial evacuation of the uterus. In puerperium the gland decreases, but during lactation it increases. By the climacteric, and by genital diseases, goitre and other thyroid diseases are diminished.

Michael.

Formanek and **Haskovec**.—*Contribution to the Function of the Thyroid Gland*. "Klinische Zeit. und Stenitfragen," 1895, Helt 3 and 4.

THE authors conclude: In cachexia strumipriva the number of the red corpuscles decrease, the leucocytes increase, and microcytes appear; the hæmoglobuline is diminished, and the iron in the organs is increased. The thyroid gland is an hæmopoetic organ.

Michael.

Gottlieb (Heidelberg).—*On the Effect of Thyroid Gland Preparations on Dogs after Removal of the Thyroid*. "Deutsche Med. Woch.," 1896, No. 15.

FEEDING with the gland substance or with thyroïden cures the pathologic symptoms after thyroïdectomy. The animals fed with thyro-iodine died from eclampsia in spite of the treatment. The experiment shows that thyro-iodine

alone, which has such a great influence in many pathologic conditions, does not contain all the efficient substances of the gland. *Michael.*

Hennig (Königsberg).—*On Thyro-iodine.* "Münchener Med. Woch.," 1896, No. 17.

THE author has used the medicament in obesity with good results. In cases of goitre and Basedow's disease the effect was not so constant. In some cases disagreeable effects are observed, as palpitation, headache, and other nervous symptoms; also, sometimes albuminuria and glycosuria. *Michael.*

Richter (Berlin).—*The Destruction of Albumen during the Use of Thyroid Tablets.* "Centralbl. für innere Med.," 1896, No. 3.

THE author made experiments in a healthy person, and found that it is possible to produce a decrease of the body weight in a few days without increased destruction of albumen. *Michael.*

EARS.

Alderton, H. A. (Brooklyn, New York).—*The Upper Tone Limit in the Normal and Diseased Ear, as determined by the Galton Whistle.* "Arch. of Otol.," Jan., 1896.

It will be seen by the accompanying chart, which embodies Dr. Alderton's observations, that, either from the peculiarity of the actual instrument employed or from the nature of the cases, the deviations from the normal average Galton are much less than we frequently find.

Disease.	No. of Cases.	Average Age.	Average Galton.	Normal Galton at same Age.
Cerumen	11	31	1'58	1'51—'58
O. M. C. Sub.	6	24	1'55	1'37
O. M. C. A.	3	31	1'97	1'5
Tubal Catarrh.....	8	37	1'58	1'6
Tubal Obstr.	31	12	1'6	1'35
O. M. C. C.	56	30½	1'83	1'45
O. M. P. C.	18	25	2'02	1'37
O. M. P. R.	5	19	1'78	1'35
O. M. Resid.	22	19	1'97	1'35
Labyrinthine Anæmia	4	20	1'5	1'36
Neurasthenia	13	28	1'6	1'37
Hysteria	1	15	'8	1'35
Nerve	70	43	2'7	2'1
O. M. C. C. et Int.	198	41	2'98	1'95
O. M. Res. et Int.	28	40	3'09	1'8
O. M. P. C. et Int.	7	43	2'64	2'1
Tubal Obst. et Int.	7	27	2'45	1'36½
O. M. C. Sub. et Int.	6	56	3'95	2'85

On comparing the average of the tone limit in the middle-ear diseases with that in the normal ear, there is a lowering of '18 to '55. Dr. Alderton finds that, in functional affections of the labyrinth, the upper tone limit is very slightly impaired, and may even be elevated in hyper-sensitive conditions; that in labyrinthine or nerve diseases the average upper-tone limit is '6 below the normal; further, that

combined middle and internal ear diseases are capable of producing a lower average upper-tone limit than internal ear diseases alone. Like others, he finds various discrepancies between the results given by Galton's whistle and the other methods, especially bone conduction. In some nerve cases there was great impairment of duration of bone conduction, especially for the higher forks, even with very good hearing for Galton's whistle; and he attributes this to an enervation or weakening of perceptive ability. [This is quite in accordance with the general conclusion arrived at by Gradenigo, that in functional, hysterical, or central affections, the loss of hearing is more marked in the middle than in the upper extremity of the range. This honest study of discrepancies is well worth attention, the general result of it being to emphasize the necessity for an intelligent comparison of the results of the various tests, and, above all, for a liberal discount in the case of minimal variations.]

Dundas Grant.

Gradenigo (Turin).—*On Thrombosis of the Lateral Sinus of Otitic Origin.* ("Sulla Trombosi Otitica del Seno Trasverso.") "Arch. Ital. di Otol.," 1893, p. 484.

THE following is a *résumé* of three extremely interesting cases which form the subject of this paper. The first patient, a man of fifty, presented a mastoid fistula of several months' duration, consecutive to an acute attack of otitis. On opening the antrum a perforation was found in the bone at the point of exit of the mastoid vein, which was thrombosed. The latter was opened, and an aseptic clot removed from its interior. Puncture made into the lateral sinus proved that the clot extended to that vessel, but the patient presenting no symptoms of pyæmia, no incision was made. The antrum being freely opened it was noticed that pus poured from the perforated internal wall, and that the stream was doubled in amount on the exercise of pressure over the muscles of the neck (mastoiditis of Bezold). A curved probe introduced through this perforation could be felt under the skin of the neck at a point eight centimètres below and behind the point of the mastoid. A counter opening was made at this level. Three weeks later, the drainage proving insufficient, the two incisions were united. It should be noted that at the time of the first operation, which gave opportunity for exploration of the lateral sinus and the portion of dura mater in its vicinity, no subdural abscess was found. Moreover, ophthalmoscopic examination made before operation gave a negative result. There was every reason, therefore, to expect a favourable issue to the case, but on the day following the second operation the patient was attacked with fever and restlessness, then sank into coma, and died the next day.

At the autopsy there was found purulent infiltration under the pia mater; a cerebellar abscess the size of a nut at the base of the left hemisphere under the neighbourhood of the bulb.

We have in this case a fresh example of cerebellar abscess of otitic origin, developing as a sequel to perforation of the posterior wall of the antrum at the level of the sigmoid groove. It much resembles one which my pupil, Dr. Anderódiás, observed at my clinic, and which is recorded in No. 6 of these archives (1895).

We would merely remark that in Gradenigo's case the abscess, much smaller than in our case, remained completely latent, and by reason of its small dimensions and situation would have been very difficult to reach by operation. We find in this instance fresh confirmation of the opinion which we have already expressed, that, even in the absence of all intracranial symptoms, one ought to think of the possibility of cerebellar abscess when one finds on opening a mastoid a perforation of the postero-internal wall of the antrum which exposes the lateral sinus.

The second is that of a woman, fifty-five years of age, with right otorrhœa of twelve years' standing, who was already in an evident state of pyæmia (fever,

delirium, signs of pulmonary infarction) when he saw her for the first time. She soon succumbed, and at the autopsy there was found fungating osteitis of the tympano-mastoidean cavity, with a friable condition of the tegmen and the wall of the sigmoid groove; septic thrombosis of the lateral sinus reaching as far as the jugular vein, but not involving the sinus on the opposite side; subdural abscess in the region of the tegmen, and pulmonary infarction.

In the third case, that of a man of thirty-seven, the subject of acute purulent otitis of a month's, and of mastoiditis of eight days', duration, the complications of pyæmia, characterized only by great oscillations of temperature, could be controlled for a time.

The antrum was opened by operation, but fifteen days later the characteristics of the fever appearing to suggest sufficiently clearly a possible sinus phlebitis, this vessel was exposed, and presented the appearance of a hard cord of yellowish colour. It was opened, and its contents, composed of yellowish clots, were curetted until blood began to flow at both ends, which were plugged with iodoform gauze.

The fever subsided and cure followed.

The only symptoms observed in this case were extensive oscillations of temperature, stiffness of the neck, abundant perspiration, and rapid loss of strength. Rigors were absent, as well as the modifications to be looked for along the course of the jugular.

It is to be noticed that the thrombus did not extend low down, since on curettement being performed blood flowed from the lower as well as the upper end. We observe also that Gradenigo abstained from prophylactic ligature of the jugular, as recommended by other writers.

"Arch. Intern. Lar., Otol., and Rhinol." *Luc (Waggett)*.

Method of Administration of Pilocarpin in Otology. "Arch. Inter. Lar., Otol., and Rhinol.," Jan. and Feb., 1896.

AN editorial note, recommending the following details of technique:—

Hypodermic injection of a one-in-a-hundred solution (equal parts of eau distil. de laurier-cerise and boiled water) of nitrate of pilocarpin. Injections to be made first thing in the morning on an empty stomach. Four milligrammes for the first dose; increasing the dose by one milligramme daily until the maximum, one centigramme, is reached. About fifteen injections are advised. Special arrangement should be made so that saliva may be ejected without the necessity of movement, which will uncover the person as the patient lies in bed.

The heart should be carefully watched, and signs of failure should be met with spartein, digitaline, or valerianate of caffeine.

Ernest Waggett.

Somers, Lewis S. (Philadelphia).—*Acetanilid as an Antiseptic in Chronic Suppurative Otitis.* "Med. News," April 4, 1896.

THE author refers to the use of acetanilid as a general antiseptic and the satisfactory results obtained. He points out that it is exceptionally suitable for application in cases of suppurative otitis, being non-irritating, odourless, antiseptic, soluble in the discharge, and not caking or forming lumps, and advises that it should be used mixed with equal parts of fine boric powder. He urges the importance of the most careful antiseptic precaution being necessary in order to secure success, the nose and naso-pharynx being frequently washed out with an antiseptic solution.

The author mentions twenty-six cases treated by the application of acetanilid, the duration of the discharge varying from three days to twenty years, averaging

three years. In every case cure was complete within three months, the average length of treatment being one month.

In conclusion, he points out that the above results are far in advance of those obtained by the use of any other drug ; in some of the cases one application being sufficient to stop the discharge.

St George Reid.

REVIEWS.

Passow. — *Eine Neue Transplantations-Methode für die Radikaloperation bei Chronischen Eiterungen des Mittelohres.* ("A New Transplantation Method for the Radical Operation in Chronic Suppurations of the Middle Ear.") By Staff Surgeon Dr. Passow. 1895. Hirshwald : Berlin.

THIS method resembles to a considerable extent that already described by Siebenmann, and practised by various surgeons in cases of cholesteatoma, the object of course being to make a permanent opening in the mastoid region. Siebenmann's flap was taken from the skin behind the mastoid incision ; Passow's, on the other hand, is taken from the tissues in front, and the mastoid incision is made about half an inch further back than usual, beginning a good two centimètres from the attachment of the auricle and behind the tip of the mastoid process. It is carried almost perpendicularly upwards, and gradually approaches the auricle at the level of the external meatus, where it is only from one to one and a-half centimètres behind the attachment. It then continues upwards parallel to this. The length of the incision depends upon the individual case. The periosteum is separated at the lower part, and the operation is carried out very much in the ordinary way ; but in the later stage of it another flap is made by cutting from the inferior extremity of the original incision forward and downward from one to one and a-half centimètres, and then from the anterior extremity of this vertically upwards in a direction parallel to the primary incision, and extending up to the lower insertion of the auricle. A tongue is thus formed, which is dissected up to the depth of the superficial fascia of the neck. This flap is then turned upwards and backwards, and its originally anterior edge is stitched to the posterior lip of the mastoid incision. The space from which it was dissected is obliterated by the bringing together of the skin margins in front and behind. The applicability of the highly ingenious method will be readily appreciated and easily understood, but all difficulty is removed by a moment's study of the beautiful illustration attached to the little brochure on the subject.

In many cases it is almost impossible to arrive at a determination, before commencing the operation, whether the extent of the supposed cholesteatoma is such as to call for the establishment of a permanent post-auricular opening ; and if the incision is made in the usual position the above-described method of transplantation is practically inapplicable, whereas Siebenmann's flap can be made at the end of the operation as usually performed. At the same time there seems no objection to making

the incision as far back as Passow directs, if there is the least probability of a permanent post-auricular opening being required. The space left bare by the dissection of the flap appears to be more easily closed by the approximation of the skin margins than in the case of that left in Siebenmann's operation. The minuter details must be studied in the original.

Dundas Grant.

Gleason. — *Diseases of the Nose and Throat.* By E. BADWIN GLEASON. Kimpton's "Students' Essentials." Second Edition, revised, 124 illustrations. 1896. London: Kimpton.

THIS is the second half of a book of 290 pages, the other half of which is devoted to the essentials of diseases of the eye. In a previous issue we had the pleasure of awarding a considerable degree of praise to the matter presented by Dr. Gleason in the companion volume on the essentials of diseases of the ear, expressing our regret on that occasion, as we do on this, that such an intelligent and acceptable *résumé* of the information on the subject should be marred by the undesirable adoption of the catechism form. We ask, for instance, what useful purpose is obtained by heading a long paragraph of three pages by the question—"How is the removal of exostoses accomplished by means of drills and trephines driven by an electric motor?" The answer, however, is admirable in its conciseness and in the method of illustration employed. At the same time the information throughout the book is excellent, and the illustrations of instruments, morbid appearances, anatomical and other features are very well selected from standard works and monographs, the author's acknowledgment of the original source being freely made. Many of them are entitled to the respect due to old, albeit well tried, friends. On the whole the book will be found a very useful one.

Dundas Grant.

Gardiner—*The History of Surgical Anæsthesia.* By H. BELLAMY GARDINER. London: Baillière, Tyndall, and Cox. 1896.

THIS subject, which is one of perennial interest, is treated concisely and in a most readable manner in a small brochure of 31 pages. In it Dr. Gardiner arranges for us the landmarks, which are, however, more or less familiar to all educated practitioners; but he carries the subject to a later date, and includes the much-debated results of Surgeon-Major Laurie and the Hyderabad Commissions, without, however, offering any definite judgment upon them. He speaks in high terms of praise of the admixture of a small percentage of oxygen to nitrous oxide gas, and we feel sure that those who have seen its action will quite agree with him. Dr. Hewitt is quoted as holding the nitrous oxide anæsthesia to be devoid of all risk whatever. Ether has yielded one death in 14,032 cases; bichloride of metholine, one in 5000; chloroform, one in 2247. We cannot help thinking that the present day graduated dose inhaler might very well have received the honour of reference or even detailed description in this work, as well as the one described by Jabez Hogg in the "Illustrated London News," February, 1847.

Dundas Grant.

Rowland, Sydney.—*Archives of Clinical Skiagraphy.* The Rebman Publishing Company, Limited, 11, Adam Street, Strand, W.C. 4s. Portfolio, to hold twelve numbers, 2s.

By these archives we shall be able not only to see month by month what further steps this wonderful scientific discovery of the so-called X rays has made, but we shall have a permanent record of those steps.

Mr. Rowland leads us gradually and skilfully through the laboratory, explaining first the brief history of the discovery, next construction of a crystoscope; then by the aid of a diagram the action of the light rays, and their course, as shown by a diagram, is described in the same pleasant and easy manner. We have now a plate which shows the actual process of the production of a skiagram of the leg. We hope that Mr. Rowland will tell us a little more about the current he uses, for instance, and what changes are required between our main and the Crookes tube. This first number is strangely silent on all these points.

The plates, which are of much clinical interest, include a needle imbedded in a finger, two cases of exostoses, a gumma of the radius, and a double plate of a three months old child. These collotypes are all well produced, and show in how short a time the X rays have been mastered as it were, and how, if this be the product of so brief a period, what and where will be the end? We wish the author success.

Smith.—*Our Growing Children.* By GERARD SMITH. London: Bale and Sons, Great Titchfield Street.

THIS little book, which is written in a popular style, has several good points, one of them being its illustrations. The text is clear, and as a book to be studied by the laity is very good, but there is not sufficient detail to place it on the list of text-books. Our object in reviewing this book, though briefly, is that here we have a book which we can place in the hands of parents—an advantage which will be recognized in the endeavour to obtain the fullest benefit after the removal of nasal obstruction.

Avellis (Frankfurt-a-M.) — *Der Gesangsarzt. Gemeinverständliche ärztliche Bemerkungen zur Gesanglehre und zur Hygiene der Stimmorgane.* ("The Singers' Physician. Popular Aid to the Knowledge of Singing and Hygiene of the Vocal Organs.") Frankfurt-a-M. Alt. 1896.

THE author gives some rules on vocal hygiene, but omits all anatomical and physiological remarks, because he does not believe that they will be understood by singers. The laryngologist only, can prevent vocal misuse at conservatoires; and proper direction of muscular energy best strengthens the voice. We cordially endorse the following views expressed by the author:—Good singing is not possible if the nasal passages are obstructed; therefore one should not sing during catarrh or with nasal obstruction.

Michael.

NEW INSTRUMENTS.

A HANDY POST-NASAL ADENOID FORCEPS.

THE forceps of which a cut is adjoined has been designed and used by Dr. Quinlan, of New York, for a considerable time. It will be observed that it is much smaller than Loewenberg's instrument or its modifications.



It has a comparatively large grip, and its blades are notable for their flat shape. There is, further, plenty of room for the uvula to hang between them without being nipped, and the parts can be taken asunder at the so-called French joint, so that thorough cleansing can be perfectly effected. The somewhat peculiar snout-like projection of the cutting part of the blades seems rather to fly in the face of our stereotyped ideas of the anatomy of the part, but to those who have recognized how frequently the atlas vertebra projects forward, leaving a concavity above it from which the vegetations chiefly originate, the applicability of this particular instrument will be quite evident. In point of fact, the undersigned has used it in a very large number of operations, and with the greatest possible satisfaction, especially in the class of cases above referred to.

Dundas Grant.

WATER PRESSURE ACCUMULATORS.

Water Pressure Accumulator Syndicate, Ltd., Trafalgar Buildings, London, W.C.

THESE accumulators are of metal and of spherical form, and are made in three sizes, the smallest of which are very convenient for local application of sprays, etc., to the throat and pharynx, hold about a pint, and the largest about two to three gallons. We have carefully examined them, and give to our readers the following opinion in which we have full confidence.

To begin with, these globes are filled in a very simple way with water, after a deodoriser or antiseptic in concentrated form has been added in sufficient quantity to render the whole contents of the required strength. After this air is rapidly pumped in until the inside pressure is sufficiently high. The required form of spray or stream is then obtained by screwing on a nozzle which gives that particular result. At the present moment this ingenious apparatus is being adapted more to the requirements of

our specialty. A flexible tube is to be attached to the larger receiver, which will be provided with an aural nozzle and means of heating the contents—though hot water may be used at the very commencement—by means of which cerumen can easily be removed from the ear, cavities flushed—as for instance the antrum of Highmore—and all without any labour. The smallest sizes are of great use as sprays, fountains, or disinfectors. The larger sizes will prove an immense boon to all aurists, as well as to general surgeons, for if sterilized water is desired the whole globe and its fluid contents may be placed in a sterilizer, and one has then a douche of great force without any chance of contamination.

THE
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**NOTES ON THE ANATOMY AND PATHOLOGY OF THE
PERIOSTEUM OF THE EAR.**

By R. LAKE, F.R.C.S.

IN investigating the anatomy of the periosteum of the ear one necessarily uses the observations of Driaspul, who proved that the lamina propria of the membrana tympani was continuous with the periosteum of the annulus tympanicus. This being so, we have only to substitute the external meatus for the annulus, and can then say the periosteum of that portion of the external meatus formed by the annulus is continuous with

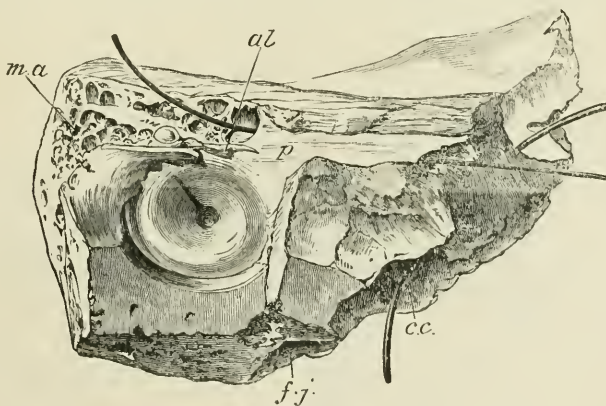


FIG. 1.

the lamina propria of the membrana tympani—that is, all except the superior part. In the horse, this portion of the periosteum is continuous with the muco-periosteum of the attic. In man, part certainly is con-

tinued on into the membrana, supporting the leash of blood vessels which passes to it slightly posterior to the malleus. Of the remainder, that portion which covers the anterior wall of the attic appears to take the same course as in the horse—also most likely giving a few fibres to the membrana Shrapnelli.

At the British Medical Association meeting in 1895 I showed some preparations which tended to prove that the periosteal structures on the

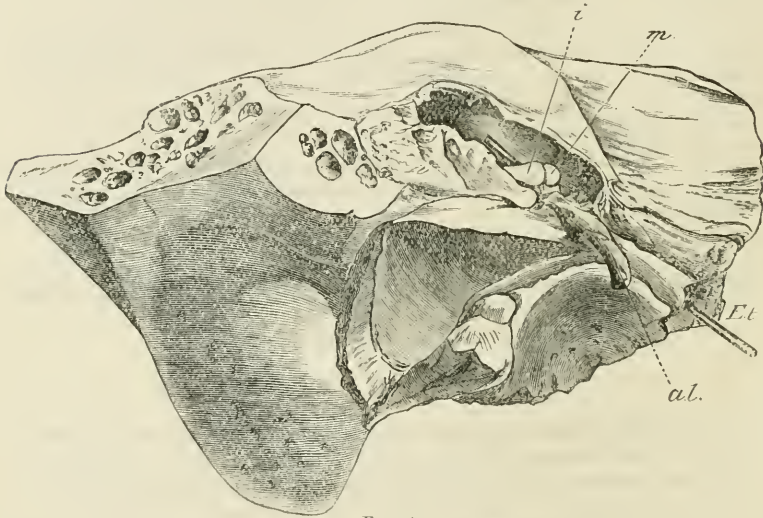


FIG. 2.

inner side of the membrane had an important share in the formation of the membrana, also that the periosteum of the Eustachian tube was directly continuous with that of the meatus.



FIG. 3.

In fact, so delicate is the periosteum of the external meatus that in Figure 1 it has been removed, giving the impression that the membrane is entirely derived from the Eustachian periosteum (*p*).

In Figure 2, however, where the meatal periosteum is preserved, its continuity with the tubal periosteum is seen; in the same figure the anterior ligament (*al*) shows the position of the membrane.

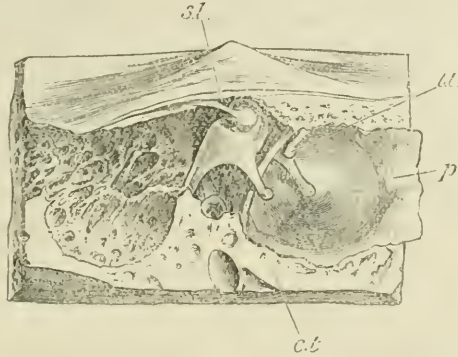


FIG. 4.

Figures 3 and 4 are from specimens cut to show the direct continuity of the tubal periosteum with membrane when seen from within; the tubal periosteum (*p*) is in the preparation whiter and clearer than shown here.

I have not been able by dissection to trace the fibres of the lining

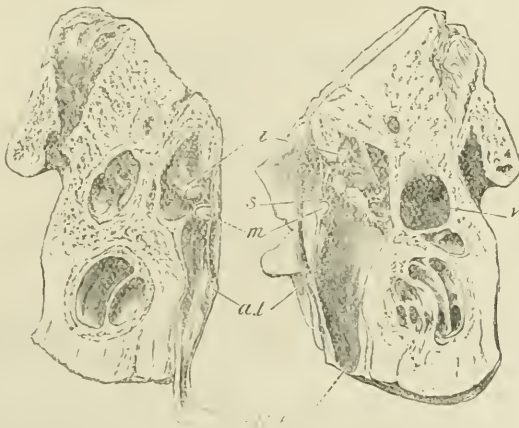


FIG. 5.

membrane of the antrum into the drum, but they doubtless take that course, except where passing into the meatus externus.

In the fœtus (Figure 5) the thin membranous Eustachian tube is directly continued into the drum and canal, and the annulus may be

removed without in any way interfering with the membrane as in Figure 6.

The pathological value of these observations is not very great, but they assist in explaining the occasional presence of bone corpuscles in the membrane, and the formation of calcareous plaques, together with those cases in which swelling of the meatus externus follows on a nasal catarrh. In these latter cases the inflammatory process extends along the Eustachian tube to the membrane, from which it is continued to the periosteum of the external meatus, setting up an acute and desquamative otitis externa.

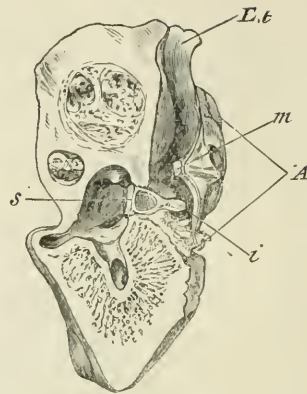


FIG. 6.

SOCIETIES' MEETINGS.

TRANSACTIONS OF THE AMERICAN LARYNGOLOGICAL ASSOCIATION (*continued*).

Eighteenth Annual Congress, held at Pittsburgh, Pa., May 14th to 16th, 1896.

President, Dr. WILLIAM H. DALY (Pittsburgh).

Special Report for the JOURNAL OF LARYNGOLOGY. By JAMES E. NEWCOMB, M.D. (New York), Fellow of the Association.

First Day, May 14th.—Afternoon Session (continued).

Tubercular Infection of the Lymphoid Tissue of the Pharynx, with some Remarks on Laryngeal Infection. JONATHAN WRIGHT, M.D. (Brooklyn).

This paper was an addendum to the author's paper read at last year's Congress. Working along the lines suggested by Diculafoy's paper on concealed tuberculosis of the tonsils, he had repeated the latter's experiments in twelve unselected cases, inoculating guinea-pigs with tonsils and adenoids (which in each case were examined histologically and bacteriologically) with negative results. The animal experiments made by Dr. W. H. Park also resulted negatively. Tubercle bacilli having been

found by Strauss and others in healthy noses and throats, Dr. Wright was inclined to think that Dieulafoy's results were due, as Cornil suggests, to surface contamination. Botey, of Barcelona, has also published results similar to those of Wright.

Reference was also reported to a case of Dr. W. F. Chappell, of New York. The patient had naso-pharyngeal tuberculosis following an operation for adenoids. Tissue taken from this case, and subjected to the same methods of examination as in the twelve unselected cases, was found to contain tubercle and tubercle bacilli histologically, while Dr. Park, by animal inoculation, also obtained positive results. This goes to prove that Dr. Wright's methods were not at fault in the twelve cases supposed clinically to be non-tuberculous.

Moreover Dr. Wright found, in taking sections from a tubercular arynx, indisputable evidence of the penetration of intact epithelium by the bacilli, but he is not prepared to say that this is possible in healthy throats.

The Relation of Diseases of the Nose and Throat to Disorders of the Digestion. Acute Diseases of the Nose and Throat. Dr. M. R. BROWN (Chicago).

He called attention to the pharyngeal hyperæmia so often found in cases of stomach cough. Asthmatic attacks were frequently due to digestive disorders, which also caused œdema of the larynx, which might be angio-neurotic in character. Allusion was made also to the various acute throat conditions seen in the course of hepatic cirrhosis. On the other hand, gastric disturbance often came from swallowing the secretions from sores in the pharynx. Glottic spasm might result from upward pressure of the diaphragm caused by gastro-enteric troubles. Much attention had recently been given to the laryngeal condition in typhoid fever. We might have all grades of severity of lesions, from simple hyperæmia up to loss of tissue, œdema, infiltration, ulceration, or perichondritis. There was no proof of the direct influence of the stomach in many throat conditions, but there was a strong clinical suggestion of the relation of cause and effect.

Chronic Diseases of the Nose and Throat. Dr. T. R. FRENCH.

He observed that chronic throat, nose, and ear disturbances were generally accompanied by digestive disturbances, but we cannot always demonstrate the relation of cause and effect between the two. Many causes producing catarrh first act on the digestive organs. Rapid eating is a great American habit, and it is a question as to whether it causes the prevalence of catarrh among this nationality. The writer had examined fifty medical students, all with catarrh of the pharynx and fauces. Of these, forty-seven had digestive disturbances; fourteen were constipated; only one had a clean tongue; forty-five were rapid eaters; thirty-three were smokers; sixteen had nasal obstruction; two were mouth breathers. The non-smokers seemed to have just as much pharyngeal catarrh as the smokers. Approximately the same ratio of different lesions was found in an examination of twenty-three women. There did not seem to be

any relation between the part of the digestive tract involved and any special localization of the catarrhal process in the throat.

Stomach disorders would also cause vaso-motor changes in the turbinated bones.

Dr. WRIGHT alluded to some recent work by a couple of Italian observers on the etiology of coryza. They had found in this disease an enormous increase in the number of sarcinæ ventriculi, which are common sojourners in the nose.

Dr. CASSELBERRY alluded to the work of Türck, who had found the same micro-organism in the stomach as in the diseased naso-pharynx. A cure of the latter cured the stomach condition.

A Case of Gunshot Wound of the Pharynx. Dr. D. N. RANKIN (Alleghany).

The patient had been shot in 1847, in the right side of the neck, the bullet penetrating two inches below the lobe of the ear, and coming out at a corresponding point on the left side. No particulars could be learned as to the existence of hæmorrhage or difficulty in deglutition. The patient had only recently been seen by the reporter, who was led to inquire into his history from seeing the symmetrical scars on the side of the neck.

Second Day—Morning Session.

A Contribution to the Pathological Anatomy of Ethmoid Disease.
J. N. MACKENZIE (Baltimore).

The paper detailed the histories of several cases of the ordinary type, and gave a description (with illustrative drawings) of the microscopical examination of the tissue removed from the region of the middle turbinated. It showed the chronic inflammatory changes which are characteristic of all inflammatory processes in the nasal chambers—a gradual destruction of the glands by leucocytes, and by the contractile effects of fibrous tissue. We were accustomed to call the tissue removed in such cases myxomatous, but the writer would take exception to this use of the term on the following grounds:—

1. The so-called myxomatous degeneration is not really a mucoid change at all, but a simple inflammation. The word "myxomatous" has been very loosely employed. The nasal chambers are really the last place where we should expect to find any tissue resembling true mucoid formation, as Wharton's jelly or the vitreous humour. The ordinary mucous polypus is an oedematous fibroma, *not* myxoma; that is, it is a chronic degenerative destruction by round cells and fibrous tissue, and is a legacy of simple inflammation. The term "endo-rhinitis" might be applied to these cases.

2. The error into which we have fallen has resulted from our looking at the matter entirely from the clinical and not from the microscopical side.

3. Ethmoiditis, moreover, even if purulent, may last for several years

without causing any bone lesion. Many writers speak of caries and necrosis as frequent accompaniments of this condition. The primary origin of necrosis, however, in these cases has not been established. Pent up secretion may sometimes cause osteitis, but not necrosis; and polyp do not arise from necrosed bone.

4. The changes here found represent successive stages of the same affection, and hence a variety of names is not necessary.

5. There is a similarity between the new granulation here occurring and sarcoma. We must therefore always examine different portions of the masses removed before pronouncing upon their nature.

Dr. CASSELBERRY remarked that while Dr. Mackenzie had taken the word "myxomatous" away from us, he had given us nothing to use in its stead. He objected to the term "endo-rhinitis."

Sero-purulent Maxillary Sinusitis in Chronic Lead Poisoning. Dr. H. L. WAGNER (San Francisco). (Paper read by title.)

The advancement made in the study of etiology in diseases of the nasal sinuses has greatly improved the methods of treatment. The results in this study are obtained, not only by histological and bacteriological analyses, including *post-mortem* examinations, but also depend upon a careful examination of the whole system.

The following case fully illustrates the views on this subject :—

H. M., aged thirty-two years; occupation, carriage-painter for twelve years; consulted me a year ago for severe neuralgia of the right supra-orbital region. These neuralgic pains had existed for three consecutive years, occurring daily at intervals from one to twelve hours, and consequently the patient was obliged to relinquish all work. He was afflicted with hyperosmia: strong odours of any kind producing pain. Opiates and various coal-tar derivatives were prescribed by his former physicians, without any result, and the resection of the right supra-orbital nerve even failed to bring relief. All teeth in the upper jaw—some of them decayed and discoloured—had been extracted, the source of trouble being located there; but no relief followed.

Examination.—Patient a well-built man, skin yellow in colour, flesh lacking in firmness, no syphilis, eyes and ears normal, throat showed slight pharyngitis sicca. Nose: Left side normal; right, slight hypertrophy of the middle and lower turbinated bodies. At the entrance of the hiatus semilunaris a crust formed daily, which could easily be removed, and a slight sero-purulent discharge—containing staphylococcus aureus and a few non-pathogenic cocci—could only be observed every second or third day. Face: Transillumination showed little difference between the two sides. No external swelling of face. Pressure on the supra-orbital region produced no pain. Mouth: Hypertrophy of the right upper gum; no blue lead line could be detected. Pressing upon the region of the right first molar produced severe neuralgic pain. This assured me that the cause of the trouble existed in the right antrum. Being unable to probe or irrigate the antrum through the hiatus semilunaris, I entered the cavity through the hard palate under cocaine anæsthesia with the aid of a spearhead drill (this method, which is quick

and painless, I employ frequently), and by injecting sterilized warm water a slight sero-purulent discharge was observed coming from the right nostril. Shortly after the patient was somewhat relieved, and I decided to open the antrum through the canine fossa. This was accomplished under chloroform with a large trephine drill. The antrum showed in the lower and side walls a peculiar bluish-grey hypertrophy of the mucous membrane. Probing did not reveal any caries of bone, but touching certain places produced severe pain. Microscopical examination of the hypertrophy, made by Dr. D. Montgomery, showed "loose connective tissue infiltrated with much serum and a fair number of round cells of inflammation; the piece of tissue had a covering of columnar epithelium. There were some micrococci in the tissue." After thorough removal of the hypertrophied tissue, dry treatment with borated gauze gave no relief, and also other methods of treatment were unsuccessful. I then decided to examine the urine for albumen, sugar, and lead, none of which were found; but on examining fresh tissue, removed from the antrum, I found with sulphide of sodium the characteristic lead reaction. I placed the patient at once under iodide treatment, and in a few days he was relieved of all pain; the sero-purulent discharge then ceased, and with it the formation of crusts.

Traces of lead were now detected in the urine. The patient has steadily improved, and has remained ever since free from pain.

In this case we must assign the diseased condition of the antrum, including the neuritis of various nerves, to the deposit of lead—perhaps as an albuminate. Similar conditions have been observed in a few eye cases (Stood), where optic neuritis, accompanied by severe headache, was produced by chronic lead-poisoning.

Study of Irruption of the Teeth into the Nasal Chambers. Resumé of reported Cases and Report of Additional Cases. Dr. A. W. MACCOY (Philadelphia).

Dr. MacCoy called attention to some of the reflex symptoms which may accompany the presence of teeth in the nose, instancing access of cough and laryngeal spasm. He narrated his personal experience with such cases, and gave a complete bibliography of the subject to date. He also referred to a case of nasal sarcoma, where during examination a tooth was discovered in the nose, and the interesting question was suggested as to whether the irritation therefrom might not have been the initial irritation leading up to malignant growth.

The Control of Hæmorrhage in some Operations in the Nose and Throat. Dr. A. COLERIDGE, Jun. (Boston). (Read by title.)

The first consideration in undertaking an operation under an æsthetic is the position in which to place the patient. The horizontal position with the patient on a table is often contra-indicated by the danger of blood finding its way into the pharynx and larynx. For operations confined to the nasal cavity, this may often be prevented by plugging the posterior nares as a first step in the operation. The Rose position, with the head hung perpendicularly over the end of the table, although pre-

venting blood from entering the lower pharynx, is to most operators awkward and unsatisfactory. The Trendelenburg position protects the trachea from blood in thyrotomy and operations deep in the pharynx. The most generally useful position for operating in the upper respiratory tract is with the patient held sitting in a chair opposite the operator. By inclining the body well forward, blood from the naso-pharynx and mouth flows outwards, but it is absolutely necessary in using this position that there should be sufficient assistance to control the patient. It is, therefore, much easier in the case of children than with adults.

For the local control of bleeding, where the bleeding vessel cannot be found, compression offers the best means. Styptics are to be avoided if possible, as being unreliable, a loss of time, and irritating.

Hæmorrhage from the nasal cavity can usually be stopped by plugging through the anterior nares, and ability to do this easily and quickly will give the surgeon confidence in attacking this part of the body. Hæmorrhage in the naso-pharynx is controlled by filling the cavity with gauze from below, by the same method as is employed for plugging the posterior nares.

The amount of bleeding to be expected in the removal of a new growth or hypertrophied tissue depends both upon the size and number of the vessels entering the tumour and the amount of contraction allowed by the structure of the intravascular tissue, as is shown by sections cut at right angles to their attachments. Adenoid vegetations, tonsils, and myxomata seldom give rise to troublesome bleeding, whereas sarcomata and fibromata attached to the basilar process sometimes bleed copiously and persistently. The readiest method of controlling the latter is by immediate, firm plugging of the posterior nares after removal, and packing, at the same time, through the anterior nares. In the removal of adenoid vegetations the Gottstein curette, although attended with more bleeding at first, causes less loss of blood than the longer operation with the forceps.

In removing the tonsils with the tonsillotome there is a brisk flow at first, which generally subsides quickly, although in adults it may cause serious loss of blood. This can in most cases be prevented by the use of cold wire, if the patient is under an anæsthetic, or by the use of the hot wire with the help of cocaine.

Intermittent Dysphonia Spastica. Dr. F. I. KNIGHT (Boston). (Read by title.)

Dr. Knight reviewed briefly what is known in regard to this affection, which, in its well-marked chronic form, he continues to think very rare, and added the report of a recent case in order to call attention to the intermittent character of the affection—*e.g.*, it manifested itself only in the latter half of a sermon (the subject was a clergyman), presumably on account of fatigue. It appeared suddenly after the gentleman had spoken in a perfectly normal voice for an indefinite time. Dr. Knight said this was the only patient of the kind who had consulted him who did not betray his affection unmistakably during the interview.

Afternoon Session.

A Case of Unusual Laryngeal Growth. Dr. J. W. GLEITSMANN (New York).

The patient was a Russian Jew, a street merchant, aged thirty-eight, who had been hoarse for one year, but had had no emaciation, pain, cough, or dyspnoea. Examination of the throat showed externally nothing. No enlarged cervical glands could be detected. Internally the pharynx appeared healthy. There was in the larynx, on the right side, a large, almost snow-white mass, extending horizontally the entire diameter of the larynx, from the anterior commissure to the arytenoid cartilage. It appeared to be located between the true and false cord, and looked exactly as if a bunch of cotton had been inserted all along the ventricle of Morgagni. The surface was slightly corrugated, and its free border a little irregular. The rest of the larynx presented no anomaly worth mentioning. The movements of the right side of the larynx were practically unimpaired, and adduction of the cords was perfect.

With Landgraf's double curette a piece of the growth was removed, with only slight bleeding and no unpleasant reaction. Subsequent paintings with lactic acid solutions and mild astringents with iodol were practised. Unfortunately, the fragment removed was not deeply enough cut to reveal the microscopical structure, and in about two weeks a larger piece was excised. The report thereon was as follows: "Papilloma durum laryngis, probably malignant, and perhaps carcinomatous. It is composed of proliferated papillary mucosa, covered with a thickened epithelial layer. The surface layer of epithelia presents itself as a horny covering; the underlying epithelial cells show marked proliferation with a splitting up of the nuclei. The sub-mucosa shows a small-celled infiltration in consequence of connective tissue proliferation. The epithelial layer shows a tendency to invasion of the sub-epithelial tissue, as in carcinoma. The glands at the margin of the growth appear very much changed. The individual tubules or ducts should appear distinctly separate one from another, instead of which the cylindrical epithelium appears at certain points to merge from one duct to another." After the second operation the patient refused further treatment, and the case was lost sight of.

Dr. Gleitsmann observed that allusions to whitish looking tumours of the larynx are very scarce in literature. Fränkel ("On Cancer of the Larynx," 1889) states that it is erroneous to suppose that in its earlier stages cancer of the cords produces hyperæmia or inflammation. On the contrary, the carcinoma often presents a surprisingly white appearance. Also Semon has suggested that an unusually snow-white colour or grass-like appearance in tumours points strongly to malignancy.

A Report of Cases of Tuberculosis of the Larynx, with Results of Treatment as far as ascertained. The topical Use of Bromoform, Formaldehyde, Guaiacol, and Protonuclein. Dr. S. SOLIS-COHEN (Philadelphia).

Owing to a mistake of his secretary Dr. Cohen's manuscript was missing, and he spoke briefly from memory, giving some of his experience

with the remedies enumerated in his paper. (Latter will appear in full in "Transactions.") He was accustomed to use a spray of hydrogen peroxide for cleansing the larynx, following this with some alkaline detergent. He had seen good results follow the use of formaldehyde rubbed in, in the shape of from two to ten per cent. solutions of formalin, which is the forty per cent. commercial preparation of formaldehyde. Cocaine (four per cent.) should be previously applied. Some burning pain, lasting a minute or two, generally followed. He had found bromoform to relieve the pain and cough.

Dr. GLEITSMANN praised the effects of parachlor-phenol in two per cent. solution; it produced shrivelling and absorption of infiltration. Lactic acid was good for ulcerated surfaces only. The phenol preparation he was accustomed to mix in equal parts of glycerine and water, so as to prevent stickiness.

Some of the Unusual Manifestations of so-called Catarrhal Laryngitis.
Dr. C. C. RICE (New York).

Catarrhal laryngitis not dependent upon, or not secondary to, some primary changes in the nose and pharynx is rarely seen. Given a certain amount of nasal obstruction, congestion, and hypertrophy, we always expect to find as a result the same kind, but a lesser degree, of catarrhal disturbance in the pharynx, and still less in the larynx and trachea. But there are exceptions to this rule, as the various diatheses and different visceral organic affections may each cause its own peculiar sequel in the upper respiratory tract.

There is a laryngeal condition resulting from physiological errors of the muscles of the organ, occurring in singers and speakers. Its most prominent expressions are congestion, swelling, and muscular relaxation. In the ordinary cases secondary to trouble higher up, we rarely find more than congestion of the sides of the larynx and of the epiglottis, the vocal bands not being much affected. The speaking voice is but little affected, while the untrained singer would be troubled with hoarseness; but most patients, if careful, are able to continue at their work, and need only to have the upper air tract put in order. So, also, persistent treatment will relieve the laryngitis sicca due to atrophic rhinitis and a dry pharynx.

The peculiar form of trouble to which the writer wishes to call attention is nearly always related to an unusual use of the voice.

1. There are cases in men, usually bass singers, presenting atrophy of the sub-mucous structures of the middle and lower pharynx without dryness. The pharynx and larynx are considerably atrophied: epiglottis large, the vocal bands long, and always exposed to congestion. There is a loss of power in the internal laryngeal muscles, especially the thyro-arytenoids and transverse arytenoid muscles. In such cases the symptoms are referable to the enlarged epiglottis, which rubs against the sides of the tongue. There is reflex congestion of the entire larynx. There is frequent spasmodic closure of the vocal bands, and any unusual vocal effort causes a tickling and hoarseness.

In regard to the enlargement of the ventricular bands in the condition

known as choked voice, it is difficult to say whether this enlargement of ligamentous structure represents nature's efforts to supply vibrating tissue in place of the disabled true cords, or whether the enlargement of the false cords has been entirely produced by faulty muscular action, such as forcing the sides of the thyroid cartilages together by a too forcible adduction of the bands. In the cases observed the vocal cords lack tone. The condition is probably due to a forcing of the voice. Prognosis is bad, because actual hypertrophy of the ventricular bands has already taken place.

There is also a condition which may be called "congenital vascularity of the vocal bands." The cords are reddened, but voice production is not interfered with. The rest of the larynx seems to be perfectly normal. No blood vessels can be detected, but the bands are uniformly red.

Again, we may find a localized congestion of some part of the larynx, not catarrhal, reflected downward from above, but congested mucous and sub-mucous tissue, evidently caused by over-use of some particular group of muscles. This condition most frequently involves the arytenoid cartilages. The inter-arytenoideus is probably the over-worked muscle in these cases, as it forces the two cartilages too strongly together.

There is, moreover, the common condition of "singers' nodes." The writer has seen it come on in the course of three days. These enlargements, as soon as the voice is produced without muscular contraction about the larynx, show a tendency to be drawn upwards from the free edges of the cords to the upper surfaces. The proper treatment of such cases is to practise diaphragmatic breathing, and to place the expiratory impulse necessary to tone production in the forward part of the face and mouth, or well up behind the nose and away from the larynx.

Finally, there is the "voice fatigue," characterized by the disability of some one or more of the intrinsic muscles. The action may become so disordered that apparently an abnormal compensatory muscular action is attempted by the larynx to supply the loss of the feeble muscles. Such patients talk in a hoarse tone, but are able to produce certain low notes in the scale fairly well. On phonation the epiglottis and larynx, instead of being raised, dip down, and the whole larynx is pulled backward. The antero-posterior diameter of the glottic cavity is shortened. Vocal tension is impossible, and the tone is husky.

The conclusions are—1. There are two ordinary types of catarrhal laryngitis, the one following and dependent upon nasal obstruction, and the other a laryngitis sicca, an extension downwards of an atrophic rhinitis and a dry pharyngitis. In these two processes the same pathological condition exists from the commencement of the nose to the bronchial tubes.

2. We occasionally see laryngeal disturbances which, from their appearance, might belong to one of these two ordinary types, but the significant point is that they are present when the nose and pharynx are in excellent condition; or, still again, that the laryngeal disorder, although in kind like that of the nose, is in degree much greater, which is the reverse of the usual condition.

3. There are several disturbances commonly classified under "catarrhal

laryngitis," which seem to bear little or no relation to a previously existing nasal or pharyngeal disease. They are commonly observed in singers and public speakers, and are undoubtedly caused by vocal over-use and improper methods of breathing and tone production.

4. We may also have :

(a) A general tissue atrophy of the soft parts of the pharynx and larynx, which produces a disordered relation and a general muscular weakness of the larynx.

(b) The permanently enlarged and usually congested epiglottis, the larynx as a whole being nearly normal.

(c) The "choked voice" caused by actual enlargement of the ventricular bands.

(d) A permanent and perhaps congenital vascularity of the vocal bands.

(e) A localized congestion of some portion of the larynx, probably indicating an over-use of some one of the muscular groups, especially the transverse arytenoid.

(f) "Singers' nodes," caused by incorrect vocal methods, and cured by proper breathing and singing.

(g) Muscular fatigue evidenced by hoarseness and loss of voice.

5. These various disorders should be recognized by proper names, their etiology appreciated, and they should not be confused with the ordinary phenomena of a simple catarrhal laryngitis.

6. Little dependance can be placed upon local medication, unless particular attention be given to proper methods of breathing and voice production.

Dr. DE ROALDES had seen the reddened cords alluded to in singers who sang perfectly well. The condition was more common in basses, baritones, and in persons of gouty and rheumatic diathesis. It occurred less often in sopranos and altos.

Dr. SIMPSON said this condition was partly due to climatic influences and to over-use of the voice. Few great singers escaped laryngeal trouble at some time or other ; and those few who did he was inclined to look upon, in a certain sense, as freaks, for he had sometimes thought that prolonged singing was an unnatural use of the vocal powers.

Report of a Case of Incomplete Fracture of the Left Cornu of the Thyroid Cartilage, resulting from self-inflicted violence. Dr. A. W. DE ROALDES (New Orleans).

The patient had swallowed an olive stone, and the fracture occurred in consequence of his violent manipulation of the outer tissues of the neck in his effort to dislodge the foreign body.

A Case of Perichondritis of the Left Crico-Arytenoid Joint from an Unusual Cause. Dr. H. S. BIRKETT (Montreal).

The patient was a young man who contracted gonorrhœa, and who was attacked by inflammatory rheumatism during the course of this trouble affecting the left knee, ankle, and left shoulder joints, and with the onset of this he developed a soreness and difficulty in swallowing situated altogether at the left side of the throat.

Upon examination the mucous membrane over the left crico-arytenoid joint was swollen and œdematous. The ary-epiglottic fold on that side was not swollen. The vocal cords were white in colour, and the movements of the left one, that of adduction and abduction were decidedly slower than those of the right. Pressure over the affected joint outside was very painful. The voice was hoarse. The treatment consisted in constant applications of Leiter's ice coil, which afforded the patient a great deal of relief. The condition was regarded as one of acute rheumatic affection occurring in the course of an ordinary gonorrhœal rheumatism.

Third Day.—Closing Session.

DISCUSSION.

The Sequelæ of Syphilis and their Treatment. *The Nose*—CHAS. H. KNIGHT. *The Pharynx*—J. E. H. NICHOLS. *The Larynx*—W. K. SIMPSON.

Dr. KNIGHT said : The diagnosis of late syphilis of the nose is often obscure. The notes of a case of intranasal tumour, pronounced a sarcoma, for which excision of the upper jaw was advised, were given as an example. The patient developed a tibial node, which, together with the nasal tumour, disappeared under constitutional treatment. Reference was made to the characteristic symptoms of syphilis when limited to the soft parts, and to its much more serious consequences when invading the cartilage or the bone. The fact that syphilis is responsible for a certain proportion, but by no means for all perforations of the septal cartilage, was mentioned. When the bone has been attacked two problems have to be met : (1) when and how to remove diseased bone ; (2) how to remedy resulting deformity. The author advocates conservatism in dealing with sequestra, unless they are quite detached and accessible. If the dead bone is firmly attached or embedded, or its limitations cannot be clearly defined, or if it be located high up in the nasal cavity in the ethmoid region, it must be approached with great caution. Loose sequestra of large dimensions and extreme hardness may be conveniently removed through a Rouge incision. The external deformity resulting from loss of the cartilage is often not noticeable—that from destruction of the skeleton of the nose is frequently hideous. The discussion of the treatment of this condition related chiefly to a description of what is known as the Martin platinum bridge and its modifications, and of the methods of cosmetic nasal surgery.

Several cases were referred to more or less in detail. Martin's method is believed to be an excellent one with certain precautions. It is especially important that the active stage of syphilis should have been long passed, and that the patient should have had radical treatment. Great care should be taken in the construction and shaping of the platinum bridge to avoid friction and pressure ; and, finally, the dissection of the soft parts must be so wide as to obviate tension after the bridge has been put in place. The paper concludes with a reference to

the use of a simple plate of platinum slipped under the skin of the dorsum of the nose, the dissection in preparing a bed for the metal having been carried on through the nostril—a much simpler method, and one which may prove to be equally effective in conditions of moderate deformity.

Dr. NICHOLS, in discussing the question as related to the pharynx, said that, from the point of view of function, it mattered little how much the uvula and tonsils were involved. The entire destruction of the epiglottis even was well borne. Adhesions between the inferior portions of the faucial pillars caused difficult articulation and difficulty in the movements of the tongue; when it came, however, to perforation of the soft palate, serious results might ensue.

In cases of adhesion of the palate to the posterior pharyngeal wall all caustic applications should be avoided, as they would aggravate the very conditions we wished to relieve. The iodide should be systematically administered.

Symptoms of such adhesions were: impaired voice, mouth breathing, traction in the mouth of the Eustachian tubes, causing aural complications and even otitis media, muco-purulent accumulations in the pharynx, and anosmia.

He then referred to the different means which have been used to remove these adhesions. They included various applications of the knife and galvano-cautery, with subsequent digital or instrumental dilatation. No matter how deep incisions might be made the adhesions would return, the cicatrix always advancing from the apex of the adhesion. He then described the operation devised by him several years ago, in which the adhesion is treated on the same surgical principles as the ordinary webbed finger cases. This operation was always applicable, for no case had been reported in which there was not at least a fine opening from the oro into the naso-pharynx.

Dr. W. K. SIMPSON discussed *Sequelæ of Syphilis of the Larynx and their Treatment*.

In defining syphilitic sequelæ, the author drew attention to points of difference between sequelæ of syphilis and the term as applied to other diseases. In the latter instances they are considered more as accidents not necessarily occurring with the disease—as, for instance, post-diphtheritic paralysis, following diphtheria. With syphilis they are to be expected: only varying in the length of time of their occurrence and their nature as attacking the various regions and organs of the body. Early syphilitic treatment may modify, delay, or prevent their occurrence.

True sequelæ in the larynx are those resulting from tertiary manifestations, and find their best expressions in chronic thickening, loss of substance from ulcerations and broken-down gummata, or from abscesses, from perichondritis, falling in of laryngeal walls, from loss of cartilage, ankyloses of various articulations, paralysis, and the various deformities produced from cicatricial contractions. The two principal conditions produced are loss of voice and a variable degree of laryngeal stenosis. Apart from sequelæ resulting from structural change, there is often in the larynx of chronic syphilis a condition of hyperæmia or possibly slight

thickening, which interferes with the nicety of control of the voice. This is especially seen in those who use their voice professionally. All syphilitics, wherever the lesion may be, who use the voice professionally, are liable to a variable amount of hoarseness and loss of control over the voice. Exacerbations of chronic laryngeal syphilis may be looked upon as sequelæ. Among predisposing causes of exacerbations are over-use of voice, exposure to cold, inclement and sudden weather changes. This is seen among certain occupations, as sailors.

He emphasized the importance of recognizing these predisposing causes and sudden exacerbations. It is these sudden exacerbations engrafted on an existing laryngeal lesion that often produce the fatal stenosis, by covering up and masking the underlying lesion. Hence the difficulty, and oftentimes impossibility, of passing an intubation tube through the stenosis, which, on the surface, appears as a smooth, even, and yielding swelling.

All laryngeal syphilitic lesions are liable to sudden serious exacerbations at any time during their existence. The author called attention to the difficulty of diagnosis of syphilitic structural changes when associated with either tuberculosis, rheumatism, or malignancy; without the finding of tubercular bacilli we cannot be sure of tuberculosis, however strong the other points may be. He referred to a combined case of rheumatism and syphilis of the larynx producing stenosis, necessitating intubation, where it was very difficult indeed to determine the predominating lesion; also to a case of sarcoma of the larynx in a patient with undoubted syphilitic history. The sarcoma was spindle-celled, and recurred in spite of antisyphilitic treatment.

In the treatment he spoke of the general use of iodide of potassium and mercury, either alone or in combination, for all cases short of stenosis, mentioning the intra-muscular injections of bichloride of mercury as lately reported by M. Irsai, which had been used with marked effect in late manifestations of laryngeal syphilis. When stenosis was not present the general treatment used is sufficient. With stenosis there was needed in addition the mechanical treatment of either tracheotomy or some form of dilatation.

The unsatisfactory results of the older methods of dilatation, as represented by the Schroetter method, the oft-repeated necessity of introduction and the rapidly recurring stenosis after the removal of the instruments, owing to the transient nature of their effects, necessitated also previous tracheotomy. Not until we had the O'Dwyer method of intubation were these difficulties overcome.

Intubation by the O'Dwyer method proved the tolerance of the larynx in these cases to long and continued pressure, which is the main feature sought in bringing about a cure. Intubation also, in a great majority of cases, did away with the necessity of a previous tracheotomy, allowing the function of breathing to be carried on while pressure was being exerted. The pressure of the intubating tube undoubtedly causes absorption of morbid tissue in certain cases, while in other cases it wears out the tendency to recurrence of the stricture.

Pressure can be better exerted in the inter-cordal space and in the

sub-glottic region ; in the supra-glottic region the space is larger and more yielding, and the size of the tube corresponding to that portion may have to be enlarged. The tube may be worn from one day to a number of months. In the adult it is best, if possible, to insert tube by aid of the mirror, exerting very often considerable pressure in order to pass the different strictures before the introducing instrument is withdrawn.

Glottic spasm may be very strong in some cases. It may be necessary to incise web-like tissue before the tube can be inserted ; the pressure of tube will absorb the incised web-like tissue. Cocaine should be used before the introduction of the tube. The string should be left in for some little time at first, so that the tube may be speedily removed in the event of stoppage. Metal tubes as a rule are the best, as by their weight they sink deeper down in the larynx, and do not rise up, as, for instance, in the act of deglutition. It may be necessary at first for patients to swallow in Casselberry position—*i.e.*, on an inclined plane, head down—or it may be necessary to either use a stomach tube or feed by rectum ; the natural act of swallowing soon adjusts itself.

Intubation is rendered difficult when, from whatever cause, the mouth cannot be well opened, or when a tracheotomy tube has been worn for a long while. A long wearing of the tracheotomy tube renders it more difficult for the larynx to elevate itself, and also produces an added stricture at the superior margin of the tracheotomy wound. One should always be ready to do a tracheotomy if, from whatever cause, intubation fails to relieve a severe stenosis. The size and shape of the tube is determined by the case in hand. The speaker agreed with Dr. O'Dwyer that intubation offers the most rational means for relieving chronic syphilitic stenosis of the larynx.

Dr. ROE had found the most serious nasal syphilis in hereditary cases, where not only the long and cartilaginous septum was gone, but even the nasal bones themselves might disappear, leaving a sulcus or hollow where the nose ought to be. In adults the process was usually confined to the cartilage, which frequently suppurated, leading to destruction of the sesamoid cartilages. He described a subcutaneous flap operation which he had devised for these cases.

Dr. DE ROALDES was opposed to the Rouge operation, as he believed that intranasal procedures would in the majority of instances secure the same result. The sequestrum could be penetrated with the drill in different directions and then be crushed.

Dr. INGALS had found syphilitic ulcerations of the cartilaginous septum rare, unless the bony septum was also involved. Of perforations, he believed that only from five to ten per cent. were syphilitic.

Dr. PORCHER called attention to the nasal condition in leprosy. In syphilis of the nose he was accustomed to prescribe mercury, controlled by minute doses of opium.

Dr. HUEBARD believed that in these conditions mercury might cause an increased destruction of bony cancellous tissue, unless the affected parts could be kept perfectly free and exposed.

Dr. DELAVAN had seen one case of complete adhesion of the soft

palate to the posterior pharyngeal wall. He would remind the gentlemen of the possible operative dangers in these cases of primary and secondary hæmorrhage.

A Remarkable Case of Fibro-Chondroma of Branchial Origin, or so-called Supernumerary Ear, removed from the Throat of an Infant six weeks old. Dr. A. W. DE ROALDES (New Orleans).

The child from birth made a queer noise in breathing, and seemed to strangle. This was at first referred to mucus in the air tubes or to possible croup. On examining the mouth, a growth was discovered. On crying, it seemed to come down from behind the soft palate, descend to the aditus laryngis, rise again, and finally lie on the dorsum of the tongue. Its covering was judged to be cutaneous and not mucous. It contained cartilaginous nodules, and was attached to the left posterior faucial pillar. The post-nasal space seemed clear.

The mass was removed by evulsion, and appeared like a supernumerary ear in shape. Examination showed it to be covered with a histological structure exactly like true skin, with also fat and connective tissue and a fibro-cartilaginous nucleus.

A diagnosis was made of fibro-chondroma of branchial origin. The external ears were normal and family history negative.

Acute Disease of the Lingual Tonsil. H. L. SWAIN (New Haven). (Read by title.)

Dr. Swain said that, if one was to judge by the amount written on this subject, it neither attracted or deserved much attention. If he was to judge by his own experience—which in the last three years had developed the fact that he must have formerly overlooked many cases of acute trouble in this locality—the subject had been and was still being sadly neglected. In any case, he had become convinced that acute lingual tonsillitis was often the cause of symptoms which were referred to other parts of the throat, simply because the latter were more frequently inflamed and more easily seen.

After some remarks on the anatomy of the parts, by which it was made evident that from the nature of the tissue and its surroundings acute inflammation would rarely assume the peritonsillar type, he went on to describe the symptoms of the various forms of acute lingual tonsillitis. He distinguished three varieties: the simple, the follicular, and the peritonsillar or phlegmonous. The symptoms were the same as in other acute diseases of the throat, modified by the difference in the locality affected. Especial stress was laid upon the cough which is so often present in these troubles, and persists long after the other symptoms subside. Very often one was led to blame the larynx in such cases when the lingual tonsil was at fault.

When the deeper seated tissues were affected much severer symptoms arose, principal among which was the involvement of the epiglottis and glottis. In such cases life might become endangered, and prompt and radical measures were necessary. Tracheotomy had to be sometimes performed.

In discussing the treatment he remarked that in no acute throat troubles were there so evident and prompt effects produced by proper local treatment as in this. Of course repetition was necessary, but one uniformly had some reward for one's labours. Anything which would reduce the swelling and inflammation was to the point. Boro-glyceride applied to the parts, and followed by a powder containing tannin and a small amount of morphia sulphate, seemed to give as much relief as anything, to be assisted by frequent hot demulcent gargles. Systemic remedies were indicated in the same way as in other forms of tonsillitis.

He closed the paper with a short history of a case of abscess of the lingual tonsil, which had slowly developed upon an attack of faucial tonsillitis. It had been ushered in by a sharp attack of œdema of the glottis. The abscess had formed close to the ary-epiglottic fold, and broke well back toward the arytenoid cartilage.

The Principles of Treatment of Simple Acute Laryngitis and Bronchitis. DR. THOMAS HUBBARD (Toledo). (Read by title.)

Most of the existing literature on the use of expectorants is full of inconsistencies, and much of the treatment advised is irrational. Stimulating expectorants fortified by opiates, and local palliative treatment, are quite too popular, to the unwise exclusion of a judicious use of relaxing expectorants.

Attention is called to the essential features of acute inflammation of the middle respiratory tract. Hyperæmia of the bronchial membrane with more or less swelling, produces a condensation of the cellular elements, since the same number of epithelial cells occupy smaller area in proportion as the calibre of the tube is lessened. This is one reason why it is so difficult to re-establish mucous flow, the outlets from the glands being closed. Retained mucus ferments, and becomes acrid and irritating, whether within the substance of the membrane or in the tubes.

Inflammation of throat and bronchi is often gradually progressive. The larynx may be in a state of resolution, and the bronchi in the acute stage, and *vice versa*, the acute stage in the larynx being prolonged by constant reinfection from diseased throat foci. Treatment must be directed in accordance with the more severe condition.

The primary indication is to establish a free flow of mucus. Apomorphia in $\frac{1}{30}$ gr. doses, repeated every two to four hours, is the best relaxing expectorant. Except in very severe cases and in debilitated subjects it is rarely necessary to follow with stimulating expectorants. Where relaxing expectorants are judiciously administered there is much less indication for opiates. All forms of abortive treatment are deprecated.

Case of Squamous Epithelioma of Velum Palate Cured by Injections of Caustic Potash. DR. HUBBARD.

For more than a year the tumour, of flat tabular type, situated partly in the velum and partly in the anterior pillar of the fauces, on the right side, had resisted internal and local treatments at the hands of several

practitioners and specialists. The cocaine habit was established. In August, 1894, he was on the verge of collapse from malnutrition, his sole diet being milk and ice-cream in limited quantity. The cocaine habit was first cured, and he improved somewhat, but nothing relieved the dysphagia. Injections of caustic potash by curved platinum needle destroyed a conical shaped tumour mass. Lesser injections were repeated wherever proliferating epithelial growths were seen around the edges. Cicatrization was rapid, and so was the improvement in general health. He gained forty pounds in two months. There are no signs of return now, nearly two years after first injection.

Some Notes of Two Cases of Sarcoma of the Nasal Chambers and Accessory Sinuses. Dr. A. A. BLISS (Philadelphia).

Case I. Patient, aged four years, with a negative family history. One year ago last January its left nostril became occluded with what were called "polypi." These were removed, but recurred in six weeks. In the next eight months the nostril was cleared out no less than thirty times. When he (Dr. Bliss) first saw the case the nostril was full of the growth, the septum deviated to the right, left eye-ball protruded, and the growth had extended into the left post-nasal space and out through the ear. The glands were not involved. The antrum was opened and found full of a fungoid mass, which was removed. The orbital roof was intact. The post-nasal space was cleared out with the finger and cutting forceps. There was considerable hæmorrhage, checked by iodoform gauze packing. Later, silver nitrate and iodoform were applied to the wound. There was no recurrence of the growth, but in six weeks the sub-maxillary glands became enlarged, the respiratory and brain centres became affected, and the child gradually died from exhaustion in a few weeks.

In this case it was believed that the malignant process commenced in the left middle turbinate or ethmoidal sinus, and that, following the path of least resistance, it grew down, forward and backward out through the ear, outward into the maxillary sinus, and upward, causing protrusion of the eye-ball.

Case II. Boy of nine. Left nares involved with exophthalmus and cervical adenopathy. It was stated that the child had been well up to three weeks before being first seen. His bad general condition precluded operation. The case was still under observation.

In both these cases noteworthy points were the early age of the patients and the rapid development of the malignant process.

During the Sessions of the Congress the following additional papers were read by title :—

Some Thoughts about the Prophylaxis of Nasal Catarrh. Dr. CARL SEILER (Philadelphia). *A Case of Myxædema of the Throat.* Dr. JOHN W. FARLOW (Boston). *Tracheal Stenosis.* Dr. SAMUEL JOHNSON (Baltimore). *Treatment of the Early Stage of Diphtheria.* Dr. S. H. CHAPMAN (New Haven). *Erysipelas of the Air Passages.* Dr. WM. PORTER (St. Louis). *Some Observations on Laryngeal Tuberculosis.*

Dr. S. O. VAN DER POEL (New York). *Reflex Epilepsy from Lymphoid Disease of the Pharyngeal Vault.* Dr. U. J. HITCHCOCK (New York).

At the Executive Sessions the following gentlemen were elected active Fellows:—G. V. WOOLEN, M.D. (Indianapolis, Indiana); W. F. CHAPPELL, M.D. (New York); T. MELVILLE HARDIE, M.D. (Chicago, Illinois); M. R. WARD, M.D. (Pittsburgh, Penn.); EMIL MAYER, M.D. (New York).

And the following to Corresponding Fellowship:—OTTOKAR CHIARI, M.D. (Vienna, Austria); GREVILLE MACDONALD M.D. (London, England); ERNST SCHMIEGELOW, M.D. (Copenhagen, Denmark); HOLGER MYGIND, M.D. (Copenhagen, Denmark).

The following-named officers were elected during the ensuing year:—*President*—Dr. C. H. KNIGHT (New York); *First Vice-President*—Dr. T. M. MURRAY (Washington, D.C.); *Second Vice-President*—Dr. D. N. RANKIN (Alleghany, Pa.); *Secretary and Treasurer*—Dr. H. L. SWAIN (New Haven, Conn.); *Librarian*—Dr. J. H. BRYAN (Washington, D.C.); *Member of Council*—Dr. W. H. DALY (Pittsburgh, Pa.).

The next Congress will be held in Washington, D.C., in May, 1897, in conjunction with the Triennial Meeting of the Association of American Physicians.

PROCEEDINGS OF THE LARYNGOLOGICAL SOCIETY OF LONDON.

Ordinary Meeting, May 13th, 1896.

FELIX SEMON, M.D., F.R.C.P., *President, in the Chair.*

The Morbid Growths Committee report that they received from Dr. BOND a microscopical specimen and the following notes of the case:—

The patient, a man aged fifty, gave a history of attacks of huskiness and loss of voice for twenty years.

Twelve months ago voice almost went, and on examining the larynx on January 15th last a growth about the size of a pea was seen to occupy the upper surface and edge of the middle of the right vocal cord. It was transparent in centre, and had a cyst-like appearance. On February 15th it was removed by the endo-laryngeal method, since when the voice has wonderfully improved, and patient states that it is better than for the past ten years.

The growth removed was jelly-like. Microscopically it seems to be a pure myxoma.

Dr. Bond would direct attention to the long history in the case. No doubt the man may have had chronic laryngitis for some years. It was common to find some myxoma in a laryngeal tumour, but a pure myxoma was very rare. He thought it possible there may have been some growth

for a long time, and that a pure myxoma was here, owing to the time which such growth had to undergo change.

The report of the examination is as follows :—

Specimen consists of microscopical preparation of three minute portions of tissue, stained with eosin and hæmatoxylin.

Examined under low and high powers it shows a covering of stratified squamous epithelium.

Immediately beneath this there is a definite layer of fibrous tissue which is somewhat dense and firm.

Deeper down, in what was probably the centre of the growth, the tissue is much looser, more cellular; many of the cells are branched, and in this part the growth has the structure of a myxoma.

In our opinion, the appearances above described point to the conclusion that the growth is a fibroma undergoing myxomatous degeneration.

The following notes are of Dr. STCLAIR THOMSON'S case :—

Marion J., aged thirty-eight, had taught since the age of seventeen, but always in private schools, the number of her class never at any time exceeding twelve. She used to sing, but her voice had been "thick" for a year past, and for the last nine months she had given up any attempt at singing. For three months she had suffered from hoarseness and partial loss of voice, especially after using it much. A spherical growth about the size of a small pin's head, smooth, red, and pedunculated, was found projecting into the glottic space at the junction of the middle and anterior thirds of the right vocal cord. There was some injection and thickening of the adjoining surface of the cord, and impaired approximation of the cords in phonation. The growth was removed with Mackenzie's antero-posterior forceps, and sections showed that it was a myxoma—unless, indeed, it should be regarded as simply œdematous mucous membrane. In 1880 Morell Mackenzie spoke of myxoma of the vocal cords as "very rare," and said that he had only met with a single case ("Diseases of the Throat and Nose," Vol. I., page 306). It was therefore noteworthy that this growth was removed on the same afternoon as the one already referred to by Dr. Bond. Both cases occurred at the Throat Hospital, Golden Square, in the clinic of Dr. Bond, to whom Dr. Thomson was indebted for kind permission to publish this one.

The following is the report of the examination :—

Specimen consists of a single slide with six small sections, stained with eosin and hæmatoxylin. The growth is covered by stratified squamous epithelium, and consists of fibrous tissue. There are no branched cells and no appearance of true myxomatous tissue. We consider the growth to be an œdematous fibroma.

The following is the report of Dr. W. HILL'S case :—

The section presented for examination is about one square centimètre in area, and stained with hæmatoxylin, rubin, and orange.

It is of irregular outline, the surface of the tissues being represented by a narrow condensed layer on three of its four sides, but no covering

epithelium is present. The central portion is composed of delicate open fibrous tissue somewhat distorted during preparation, and other elements of the turbinate body. Roughly speaking, the peripheral zone of the section, from one to three millimètres in breadth, is of a denser structure than the centre, and has failed to take the hæmatoxylin stain fully. This zone is formed of detached and coalesced patches of diseased tissue, the larger patches presenting a sinuous outline, and sending offshoots towards the centre of the specimen. In certain spots a very definite line of demarcation, constituted by a narrow zone rich in inflammatory corpuscles which take the hæmatoxylin stain freely, separates the healthy from the diseased tissue. The latter is found to consist of the fibrous tissue of the turbinate, the elements of which have lost definition of outline and the faculty of staining with hæmatoxylin. This tissue is densely infiltrated with inflammatory corpuscles, the larger number of which are in a state of degeneration. The centres of many of the larger patches are occupied by areas staining yellow, and of granular appearance. In the neighbourhood of these caseous centres the lumen of the vessels is obliterated by infiltration and degeneration of their walls, and the diseased areas are anæmic throughout. The inflammatory process appears to result in caseation and not fibrosis. No typical tubercles are present, but here and there a concentric arrangement can be made out, and at least two well-defined giant cells are to be seen. These contain numerous nuclei placed peripherally. No tubercle bacilli have been detected in other preparations. We consider the specimen to be tubercular.

Case of Obstruction of Larynx due to a Web. Shown by Dr. BARCLAY BARON (Bristol).

A man, aged thirty-nine years, who had not had syphilis nor other constitutional dyscrasia. In October, 1894, he had hoarseness and loss of voice with gradually increasing difficulty of breathing, which induced his own doctor to perform laryngotomy.

On being admitted into the Bristol General Hospital under Mr. Baron, there was found to be intense inflammation of the whole of the larynx; the vocal cords, which were in apposition, were especially affected, being intensely red, swollen, and motionless.

In spite of all that was done he continued in this condition for three months. Tracheotomy was then performed, and the laryngotomy tube removed. The effect of this was soon beneficial,—first one vocal cord and then the other leaving the middle line, and then the anterior two-thirds of the vocal cords was found to be united by a web.

This has been cut by Whistler's cutting dilator, and dilated by Schroetter's and other bougies, and now only a small amount of web tissue uniting the under surface of the vocal cords in front persists. The tracheotomy tube has been removed, and the man is able to do his work as a farm labourer. The points of interest in the case are:—

1. There is no history of syphilis, and it is believed to be an instance of a web forming after a common cold.
2. The laryngotomy tube kept up the inflammation in the larynx, and tracheotomy is therefore to be preferred to laryngotomy.

Dr. Baron asked members of the Society to express an opinion as to the advisability of doing anything further.

Dr. HALL mentioned a case in which agglutination of the vocal cords occurred as the result of syphilis. When first seen the cords were united by only a narrow band; unfortunately, the patient declined admission into the hospital. When he applied a week later the cords were adherent nearly along the whole length, and tracheotomy had to be performed at once. Whilst under treatment for removal of the laryngeal obstruction, stenosis of the trachea occurred. The patient left the Westminster Hospital after attempts had been made to check the growth in the trachea by scraping and astringents. Some weeks later the patient is reported to have died in Paris while being operated on.

Dr. CRESSWELL BABER thought the case might be syphilitic.

Dr. BOND would not go any further with the treatment.

The PRESIDENT had a case of suicide in which a web formed where the cut was. A second web had formed above by the agglutination of the cords. Webbing might occur from inflammation. He thought laryngotomy ought not to be performed, as it caused inflammation and prevented healing.

Case of Thyrotomy for Epithelioma of the Larynx. Shown by Dr. FELIX SEMON.

The patient, a gentleman aged sixty-five, was first seen on February 18th of this year. The only symptom was hoarseness dating back nearly a year and a half, and supposed to have commenced after an attack of influenza, which had also caused purulent discharge from the right nostril; this, however, troubled the patient very little. The whole of the left vocal cord, particularly in its middle part, was considerably tumefied, and showed a granular appearance. At the same time its mobility was surprisingly free, and the hoarseness, comparatively speaking, very slight. Malignant disease had already been diagnosed by Dr. Madden and Mr. Dudley Wright. The diagnosis was further corroborated by Mr. Butlin.

The operation was performed on February 27th, and offered no incidents of importance. On opening the larynx the growth was seen to extend all over the left vocal cord, and the ventricular band also appeared somewhat swollen. In front the growth just extended to the median line. The whole affected portion was delineated by two semi-circular cuts at a distance of about three-quarters of an inch from the growth, meeting in front and behind and cut with curved scissors. Posteriorly the extirpation extended to the front part of the arytenoid cartilage, which was also removed.

The patient made an excellent recovery, except that on the third day some ominous black spots appeared in the wound, supposed to be due to infection from the purulent nasal discharge. These were scraped out, and nothing further occurred. The voice is now tolerably good, a cicatricial ridge having formed in the situation of the left vocal cord, and it will probably be better when a bunch of granulation tissue, which is at present situated just in the anterior commissure, will have been removed.

This removal, however, has been purposely postponed until after the demonstration to the Society, in order to show that not every tumefaction which appears in the neighbourhood, or in the situation itself of the scar after an operation of this kind, ought to be at once considered to represent a recurrence of the disease. The present case (which is, moreover, remarkable by its complication with purulent nasal discharge, probably due to empyema of the right frontal sinus) is particularly suitable for illustrating this fact, which has been observed by the author in three or four previous cases. The formation of granulation tissue is not limited to the interior of the wound, but also extends to the external scar, and is no doubt due to necrosis and sequestration of small portions of the completely ossified projecting angle of the thyroid cartilage. Granulations such as present now in the upper part of the wound also luxuriantly grew up from the lower parts. This, however, healed spontaneously and rapidly after elimination of two or three minute particles of necrosed cartilage, which were eliminated through the external wound, and there is hardly any doubt that the same will take place with regard to the parts in which granulations are still at present seen.

Case of Uncontrollable, Intermittent, Laryngeal Cry. Shown by Dr. BOND.

A boy, eleven years of age, began in March, 1895, one night when in bed to utter at irregular intervals a loud cry. This he continued to do until August, 1895, when he went to stay for about ten days in the country, and towards the end of the visit the cry "gradually" ceased. At Christmas, 1895, a second attack came on at 3 a.m., and has continued since. The boy has lately had measles, during which the cry was emitted as usual. Until recently the mother states that the cry persisted during sleep.

The boy seems dull and stupid; hands and arms are continually working, almost like those of a child with chorea. At intervals, varying from about twelve seconds to one and a half minutes, he utters an explosive, sudden cry of considerable volume, very like part of a milkman's cry, but not resembling any word. The cry is associated with somewhat violent action of the diaphragm, and with a lifting of the soft palate. It is never emitted during a laryngoscopical examination, but directly after such an examination has been made the cry is emitted. The boy has double proptosis, also he has adenoids of the naso-pharynx.

The child's mother has had rheumatic fever, a brother has died from "irritation of the brain." The child has never had convulsions, nor worms. There is no history of chorea in the family.

The PRESIDENT did not think the mischief organic, and asked whether malingering might be excluded.

Mr. STEWART thought the trouble might be caused by the presence of the adenoid growths.

Mr. SPENCER said they had a case in Westminster Hospital a little while ago of spasmodic cough. Patient was hypnotised, when the cough changed to attacks of sneezing. She ultimately got well.

Dr. SCANES SPICER thought, from the condition of the eyes, that it was not functional.

Dr. DE HAVILLAND HALL suggested a sea voyage. He had a case in which this had excellent results.

Dr. BOND, in reply, stated that the lowered mental condition, the almost choreiform restlessness of limbs, the action of the diaphragm, and the explosive cry, taken together, seemed to negative the idea of malingering. The case was very unlike the cases of nervous laryngeal cough, and seemed to be a case of "tic convulsif." After the removal of adenoids (which would end a source of irritation, and ensure sounder sleep), in conjunction with the administration of arsenic and a prolonged change of air in the country, Dr. Bond thought the patient likely to improve. He disapproved of the employment of faradism, thinking such treatment very likely to make the boy worse. On the other hand, he had seen a cure of nervous laryngeal cough, with stiffness of one knee, of two years' standing, cured in a few minutes by faradism.

Case of Tubercular Laryngitis on which Thyrotomy has been Performed.
Shown by Dr. BOND.

This patient, a man of forty-five, in June, 1895, had a sore throat which persisted until October last. He was then having night sweats, had been losing flesh, and had attacks of severe suffocating cough. He had pain shooting up to left ear. He had lost three children from phthisis. He was much emaciated, and his face pinched and sallow. We could find no trace of syphilis, and there was no history of it. He seemed to have had slight consolidation at right apex, having slight dulness, bronchial breathing, etc., but no râles could be heard.

The left side of the larynx was fixed. There was great swelling of the left ventricular band, which was red and coarsely granular, and at the back was superficially ulcerated. The front of left cord could be seen with difficulty. There were no enlarged glands; voice very husky.

The case seemed a doubtful one, and one on which an exploratory thyrotomy should be performed, and this was done on November 15th. The whole left ventricular band was found affected and was removed, and also the inner edge of the brim on left and the left cord. On the posterior commissure were several papillary excrescences, and the mucous membrane here was also removed. The left thyroid plate was scraped, and also the anterior commissure.

The patient left hospital a month after the operation with a narrow sinus unhealed, and with some cough. Since he has considerably improved; his temperature is normal and his weight has increased to twelve stone. The larynx is somewhat deformed and congested, but there is no definite infiltration to be seen, and no ulceration. His voice is feeble, owing in part to the escape of air through the sinus.

The specimen removed was pronounced to be tubercular, and tubercle bacilli have been found in the sputum.

Case of Sarcoma Recurring in Nose. Shown by Dr. BOND.

The patient, a man of sixty-two years of age, began to have severe attacks of epistaxis from left nose in November, 1892. When seen at the Throat Hospital, in October, 1893, the left side of nose was congested greatly swollen, and completely plugged in front by a fungating, slightly

movable mass, which bled freely on examination with a probe ; enlarged glands could be felt below the angle of left jaw. The mass was removed piecemeal by a snare, and its base thoroughly curetted and the nose firmly plugged. Afterwards the site of growth was cauterized with the galvano-cautery. The growth sprang in the front of the nose from the lower part of the septum, from the floor, and from the front of the lower turbinated bone. The enlarged glands were also removed. Recurrence occurred after two and a half years, and in March, 1896, a mass was removed from lower part of septum and floor of nose. Recurrence has, however, already occurred in nose, and there is an enlarged gland in neck.

The fact that sarcoma of the nose is so amenable to intranasal operative treatment is noticeable. Dr. Bond had seen several cases of extensive sarcoma of the nose live for years, where it was impossible to perform a radical operation, and where occasional extensive curetting, etc., gave considerable relief. He would like to ask whether others have found cases of sarcoma of nose less malignant than is commonly supposed.

Mr. C. BABER said these cases bleed very much. He had a case in which there was great difficulty in stopping the bleeding after removal. There was no recurrence.

Dr. BENNETT would merely keep the passage clear, and do nothing else.

Mr. LAMBERT LACK thought the tumours were not so malignant in the nose. Extensive operations through the nose did good.

Case of Healed Tubercular Disease of the Larynx. Shown by Mr. LAMBERT LACK.

Patient, a girl aged twenty-eight, was quite well until 1893, when symptoms of phthisis developed, and she lost her voice. In October, 1893, the patient was losing flesh, had much cough, and a hectic look. She was nearly aphonic.

Examination of lungs showed dulness over the upper half of the chest on both sides, back and front, with abundant moist sounds and bronchial breathing at the right apex.

Examination of larynx showed irregular fleshy thickening of both vocal cords, with very deficient movement on the right side. There was a prominent ulcerating growth on the anterior surface of the right arytenoid, and some œdema of both arytenoids. Treatment : cod-liver oil and iron internally, and pure lactic acid well rubbed in locally once a week. After some months' rather irregular attendance she was much improved, but the tumour remained much the same. This was then entirely scraped away with the curette, and pure chromic acid applied to the resulting ulcer. This slowly healed, and in the spring of 1895 the ulcer of the larynx was quite healed. In November the larynx appeared almost normal, the movements being quite free, and there was no trace of swelling or ulceration.

Dr. HALL thought that the only thing to be done was to congratulate Dr. Lack on the success of his treatment. The cords were practically normal, and there was hardly any trace of a scar.

Case of Lupus Pharyngis. Shown by Mr. LAMBERT LACK.

The patient, aged thirty-four, says for several years he has suffered from occasional dry throat, but for seven weeks the condition has been much worse. He consulted a doctor, who noticed a small spot in the centre of the pharynx, which he cauterized, but other spots appearing he sent the patient to me.

The patient has always had good health, has had no special illnesses, there is no history of syphilis, and no tubercular history in his family.

The posterior wall of the pharynx is irregularly nodular, in places red and inflamed, in places abraded, and in others cicatrizing. Caseous scattered nodules can be seen, but no large ulcers.

The condition extends from the level of epiglottis up to the vault of the pharynx. There is no lupus on the skin, in the nose, palate, or larynx. A piece removed for examination shows numerous tubercles with much inflammatory tissue. The treatment has been arsenic internally and the cautery locally, but no sufficient time has elapsed to note the effect.

The case is apparently a very acute one, and in its limited distribution probably a rare one.

Dr. SCANES SPICER could not call the case one of lupus.

Dr. BOND thought it was lupus, and did not consider isolated lupus of the pharynx rare.

The PRESIDENT was of the same opinion.

Dr. PEGLER would like a portion removed and a section made.

Case of Healed Antrum and Frontal Sinus Suppuration. Shown by Mr. LAMBERT LACK.

Patient, F —, aged thirty-two, for about sixteen years has suffered from nasal obstruction, with occasional thick yellowish discharge, and pains over left side of head. The pain she describes as almost constant, and at times "maddening." Eleven years ago some polypi were removed from the left nostril. Patient first seen by Mr. Lack in 1893. She complained then of intense continuous pains above both eyes and in the left cheek, with a yellowish discharge from left nostril. The left nostril showed polypi and pus, the right polypi but no pus. The polypi were removed and the left antrum drilled. The antrum contained pus, but was cured by a few weeks' syringing. The patient was very slightly improved. In 1894 the left frontal sinus was opened through an incision in the line of the eyebrow, the field of operation being bounded by the supra-orbital notch and the pulley of the superior oblique. A large piece of bone was removed by the chisel, and much pus was evacuated. A long rubber tube was passed through the infundibulum into the nose, and retained for about ten days, when it was replaced by a short silver tube. After six weeks all symptoms had disappeared, the tube was left out, and the wound soon healed, leaving an inconspicuous scar under the eyebrow. The patient, nearly two years later, remains well.

Case and Specimen of Cured Polypi of Frontal Sinus. Shown by Dr. H. TILLEY.

Patient was a man aged forty-five, who came to the London Throat Hospital complaining of slight discharge from both nostrils and

occasional frontal headache. Some polypi were seen under the middle turbinate on the left side, which were removed from time to time. A discharge of pus was also constantly seen in this situation.

On further examination a probe could be passed easily into the frontal sinus. The patient was therefore anæsthetized, and a vertical incision about two inches long made from the nasion upwards; the soft parts and periosteum were drawn aside, and the anterior surface of the left sinus removed by means of gouge and mallet, when the granulations contained in the sinus bulged forward and looked exactly like hæmorrhoids of rectum. The same was the case with the right sinus. Both sinuses were curetted, and then swabbed out with zinc chloride solution grs. xl. to ʒj, and drainage-tubes were inserted into both sinuses, by means of which the sinuses were irrigated daily with boracic lotion for a week, when the tubes were removed. The wound healed, and the patient is now perfectly free from any trouble, and there is no nasal discharge. The median scar is now almost invisible.

It should be stated that previously to operating on the frontal sinus the maxillary antrum was explored and found healthy.

These two cases were discussed at the same time.

Mr. C. BABER thought that Mr. Lack's case was interesting as having, after recovery, left only a slight scar hidden by the eyebrow. He related a case under his care in which there was protrusion of the eyeball from distension of the left frontal sinus with non-fœtid mucous liquid containing cholesterine crystals. On opening the sinus from the forehead it was found completely cut off from the nasal cavity, where there existed purulent disease of the ethmoidal cells. The case was still under treatment.

Dr. SCANES SPICER would always remove the anterior extremity of the middle turbinate bones before doing anything further.

Dr. WM. HILL had a case which had left a deep scar. He should certainly try operating through the brow, more especially in females.

The PRESIDENT related a case he had with Mr. Horsley, in which a transverse incision was made, a portion of the front of the sinus taken away, and the whole mucous membrane removed. During this operation the hopelessness of operating through the nose was apparent, as it was impossible to get at all the disease through the nose. He asked whether in these cases it would not be possible to fill up the sinuses with foil or something to prevent the falling in of the cavity.

Mr. SPENCER suggested plaster of Paris as being good for filling up bone.

Mr. STEWART thought that plaster of Paris would be too heavy for the frontal sinus.

Dr. DUNDAS GRANT mentioned a case of Waterhouse's in which decalcified bone was used to fill up a hole in the astragalus. He pointed out the difficulty of any bone healing without a drawing in of the cavity.

Mr. LACK thought the opening through the eyebrow caused no deformity. He considered it best to leave the mucous membrane untouched.

Dr. HERBERT TILLEY stated that he had recently examined the

frontal sinuses in a large number of skulls (over a hundred), and that the constant and extreme variation in the size and extent of the sinuses was in favour of an external opening, and he preferred the vertical median incision in the majority of cases. He strongly deprecated any operation from the nose, but thought that syringing the frontal sinuses from the nose, where possible, might be practised for a short time before proceeding to the external operation; if, however, the naso-frontal canal could not be found, no passage should be forcibly made.

Dr. BENNETT suggested that these one hundred and thirty cases were normal skulls. In diseased conditions it was more possible to operate through the nose. He would operate through the nose first to relieve obstruction.

Case of Mycosis of Tonsils and Pharynx. Shown by Dr. SCANES SPICER.

Patient, a man, aged thirty-five, had a well-developed thalloid projection from crypts of left tonsil, posterior pharyngeal wall, and base of tongue. Microscopically it consisted chiefly of cladothira. It had proved very resistant to paints, washes, etc. He proposed dissecting out the affected portion of faucial tonsil, and applying the galvano-cautery to the pharyngeal and lingual crypts.

Dr. HALL recommended the use of the galvano-cautery for the destruction of the mycotic growths. Absolute alcohol had not given good results in his hands.

Dr. BENNETT suggested the application of pure carbolic acid.

Dr. BRADY (Sydney) showed a tonsilotome for removing hypertrophied lingual tonsils. It was an ordinary Mackenzie tonsilotome with the blade curved to fit over the back of the tongue.

Malignant (?) Disease of Larynx. Shown by Dr. FURNESS POTTER.

M. C—, widow, aged sixty-nine, came to the London Throat Hospital on the 17th March last complaining of difficulty and pain in swallowing (principally solids).

No very definite or satisfactory history obtainable. The patient states she has had difficulty in swallowing for many years, but has been worse during the last twelve months. She has had two children stillborn and one miscarriage.

On examination with the laryngoscope a large red mass occupying the arytenoid region in its whole width was seen; this has increased considerably since the first examination. It bleeds easily on being touched, but there is no visible ulceration. Two distinctly enlarged glands can be felt on the left side of the neck behind the sterno-mastoid. The patient states that she has lost flesh rapidly lately. Dr. Potter thought that there was little doubt the growth was malignant, but would like to have the opinion of members on it.

Obscure Case of Laryngeal Disease. Shown by Dr. DE HAVILLAND HALL.

R. M. V— was shown to the Society on October 10th, 1894 (*see* Vol. II. p. 6, "Proceedings.").

The patient has continued in excellent health, and is able to cycle and dance.

In January, 1896, while at Munich, Prof. Schech detected some pale growths on the right side of the larynx filling up the glottis. These were removed with forceps and curette.

On January 21st a piece of the tip of the epiglottis was removed ; very severe hæmorrhage followed. In view of the stationary condition of the laryngeal condition and the patient's excellent health, Dr. Hall was doubtful whether the diagnosis of chronic tuberculosis could still be maintained.

A portion of the growth removed in January will be submitted to microscopic examination.

New Tracheotomy Tube. Shown by Mr. DE SANTI.

This is a tube adapted for patients who have to wear a permanent tube, and who have sufficient space to expire through the larynx though not room enough for inspiration. The tube is fitted with a small metal hollow plug with a small rim below, and in the plug is fitted a metal hinge valve something like a sewer trap : on inspiration the valve opens and the patient breathes through his tube ; on expiration the valve closes tightly and air passes through the larynx.

The danger of the valve getting loose is avoided by the metal rim below.

The advantages of the plug and valve are :—

1. That the patient can speak distinctly and without putting his fingers on the tracheotomy tube.
2. That he coughs up mucus, etc., through the larynx and out of the mouth normally.
3. That the patient is able to wear a collar and shirt and go about comfortably.

In Dr. de Havilland's Hall's case shown at this meeting Mr. de Santi has adapted his tube to the case. The patient has worn the tube and plug, which is removable, for six months, is able to talk well, wear evening dress, and bicycle twenty miles a day. He has tried the ordinary pea valve and finds it useless.

If the removable plug becomes at all blocked with mucus, it is taken out and boiled, and in the meanwhile a fresh plug inserted.

It is of course necessary that there should be an opening in the tracheotomy tube in the ordinary place at its greatest convexity.

The plug with its valve fits flush with the tube into which it is inserted.

Case of Abductor Paralysis. Shown by Mr. SPENCER.

Patient, a man aged thirty-five, had worn a tracheotomy tube since June, 1882. He was a soldier who had served in Egypt, and an abscess formed in the neck in the site of a scar at the anterior border of the left sternomastoid just above its insertion. He had felt nothing wrong with his throat, but a few hours after the opening of the abscess he was eating his dinner when he was suddenly attacked by difficult breathing, for which

tracheotomy was done the same evening. Subsequently an attempt to leave off the tube failed. He came concerning a warty growth in the tracheotomy wound, which has been removed. He can speak well with the finger over the tracheotomy tube. The vocal cords are apparently normal, but fixed in adduction; no abduction beyond one to two millimètres can be done.

The affection is doubtless due to syphilis. A nerve lesion there may have been distinct from the above. If perichondritis, it is remarkable that he should have had no throat trouble beforehand.

Chronic Retropharyngeal Abscess in an Adult. Shown by Dr. FELIX SEMON.

The patient, a gentleman aged thirty-seven, had in September last an "abscess" in the throat which took about six weeks to develop, and caused at the time considerable difficulty in swallowing, but apparently no other symptoms. It was opened, a large quantity of matter escaped, and he was then sent on a voyage to South Africa. The incision, however, never healed, and he is still troubled with much secretion, and at the same time a feeling of dryness in the throat. There is an indistinct history of syphilis many years ago, but no secondary or tertiary symptoms have ever occurred.

On examination the posterior wall of the pharynx is enormously swollen, sodden, and reddened, and particularly the right side bulges much forward. There is a longitudinal opening filled with sanious matter at the angle formed between the posterior and right lateral wall, and a smaller fistulous opening near the middle line. The probe introduced into these openings does not touch any rough bone. The swelling extends a long way up into the naso-pharyngeal cavity, the movements of the head are particularly free, the vertebræ are not tender to touch at all; no evidence of any pulmonary affection.

The patient was put on 10 grs. of iodide of potassium, and when he appeared a week after (April 22nd) a diminution of the pharyngeal swelling was noticeable, but no other change. A consultation was held with Mr. Horsley, who agreed that there was no bone affection or evidence of tubercular mischief. The patient is now still taking iodide of potassium. Should, after another three or four weeks, the abscess not close spontaneously, it is intended to connect the two openings by a horizontal incision at the lower part of the abscess, and to scrape out freely the walls of the abscess.

The case is shown because a chronic retropharyngeal abscess in an adult, without any traumatic or diathetic cause known, is exceedingly rare.

A Drawing of a Case of Extrinsic Malignant Disease of the Larynx. Shown by Dr. WATSON WILLIAMS.

A Coloured Drawing of a Case of Early Malignant Disease of the Vocal Cords. Shown by Dr. WATSON WILLIAMS.

Dr. Williams thought that as the disease was intrinsic, localized, and early, it was suitable for radical extirpation after thyrotomy, but the

fact that the patient was seventy-four years of age was considered sufficient to negative such a procedure. The movement of the vocal cords was greatly impaired. The voice had been hoarse two months, and this was the only symptom. There was no alcoholic or syphilitic history. As operation was negatived it was considered inadvisable to complete the diagnosis by removal of a fragment of the growth for histological examination, but he believed that the great impairment of the vocal cord movement, in the absence of any appearance of thickening around the crico-arytenoid joint, pointed strongly towards its being a case of early malignant disease rather than of pachydermia laryngis.

The PRESIDENT did not think it was a case of malignant disease.

Dr. SCANES SPICER thought it was one of pachydermia.

AMERICAN LARYNGOLOGICAL, RHINOLOGICAL, AND OTOLOGICAL SOCIETY.

Second Annual Meeting, April 17th and 18th, 1895.

President—EDWARD B. DENCH.

*Specially reported for the JOURNAL OF LARYNGOLOGY, RHINOLOGY, AND
OTOLOGY.* By Dr. R. C. MYLES (New York).

The Diagnostic Value of Ophthalmoscopic Examination in Cerebral Disease depending upon Affections of the Ear.

Dr. THOMAS R. POOLEY said that probably the first to call attention to the value of the ophthalmoscope in this connection was Dr. Kipp (Newark). One of the cases reported by him was of special interest. It was one of acute purulent inflammation of the middle ear, with double optic neuritis, but without tenderness, swelling, or spontaneous pain in the mastoid process; opening of the mastoid was followed by rapid subsidence of the optic neuritis. Details of this case were now given.

His own case was one of purulent otitis media occurring in a young boy. He had had otorrhœa for many years, and some years previously Wilde's incision had been made at Buda Pesth. When first seen by the speaker the temperature had been 102.5° , and the pulse 128. Wilde's incision was made, and was quickly followed by a subsidence of the temperature, but another rise of temperature occurred the next day. Schwartz's operation was then performed, and about a drachm of foul, gaseous matter removed from the antrum. During the operation a considerable part of the surface of the dura was exposed in the wound. For twenty days the temperature oscillated between 101.5° and 105.5° , and the patient showed occasional maniacal excitement. At the end of this time the patient became blind in the right eye, and the ophthalmoscope

showed impaired vision on the right side and violent hyperæmia on the left. Hemiplegia then developed, and soon afterward the patient died. At the autopsy the vessels of the dura were found to be intensely engorged, and there was a layer of thick, foul-smelling pus which bathed the left hemisphere. The optic nerve was swollen. The cerebellum was normal. A large encapsulated abscess was found in the anterior portion of the occipital lobe of the left side, and around this the brain was softened. It was found that the dura had not been perforated at the mastoid operation.

The following conclusions were drawn :—(1) That the ophthalmoscope was valuable in arriving at the diagnosis of cerebral disease, in some instances by confirming the evidence given by other symptoms, in others by giving the principal if not the only reliable evidence of brain disease. (2) The intra-ocular end of the nerve is never inflamed where the disease remains limited to the middle ear and mastoid, but is certain evidence of brain disease. If, therefore, optic neuritis is found, the diagnosis of extension to the brain is certain, whether or not there are other evidences of this condition. (3) The form of optic neuritis is always that seen in affections of the brain, viz., choked disc—and this may vary from simple evidence of stasis to the pronounced choked disc. In his opinion the various forms of neuritis described were only different degrees of this particular form of optic neuritis. The presence of optic neuritis was unfortunately no aid in the solution of the problem of determining the localization and nature of the disease. (4) It occurs more frequently in chronic purulent otitis media than in acute cases. In the latter it is very rare. (5) The list of brain lesions in which optic neuritis is observed embraces nearly all the usual lesions. (6) The occurrence of optic neuritis in otitis media chronica, with implication of the mastoid and a history of long-standing otorrhœa, is, by inference, due to a cerebral abscess. (7) The extent to which the presence of slight œdema of the optic disc should influence us in determining the operation on the mastoid was an open question, but he thought we might accept Andrews' conclusions, that as the operation, when properly performed, is not dangerous, we may accept œdema of the optic disc as an indication for opening the mastoid, with the object at least of establishing free drainage from the middle ear. (8) The existence of optic neuritis as an indication for more serious operation, such as an exploration of the brain for intra-cranial disease, could only be considered in connection with other symptoms, but so far as it went it made the presence of intra-cranial disease more certain.

Dr. J. HERBERT CLAIBORNE said that the conclusion presented in the paper covered in a succinct manner nearly all that was known on the subject. Many did not perform the mastoid operation in the manner that Schwartze did. Of this he could speak positively, because he had studied at Schwartze's clinic. In none of the cases seen there had there been any symptoms pointing to ocular trouble. In Berlin he had seen for seven weeks an interesting case—one of chronic purulent otitis media. The patient suddenly developed a high temperature and delirium, and had died before morning. The autopsy showed that the pus had passed

through the tegmen tympani into the meninges of the brain, and had excited purulent meningitis. It seemed to him that the optic neuritis could hardly be a reliable guide as to the best time to allow the wound to close; the ordinary guide in practice was whether or not the wound was healing properly from the bottom. He doubted whether optic neuritis would prove to be a trustworthy guide to the necessity of operating.

Dr. POOLEY said that he did not wish the conclusions to be accepted as entirely his own; they had been intended to represent rather what had been gleaned from the literature on the subject. He felt sure, however, that optic neuritis would be found much more frequently if the physician took the trouble to look for it. The percentage of cases in which the eye is affected in purulent middle ear disease had not yet been determined.

Report and Exhibition of a Case of Unusual Speech Defect.

Dr. G. HUDSON MAKUEN (Philadelphia) presented a case of this kind in the person of a young law student. When six months old this young man had lost the sight of one eye; when seven years old he had had a severe attack of diphtheria, and another at the age of twelve years; and he had had scarlatina at the age of ten. The purulent otitis media had existed since the scarlatina. In 1893 there had been an acute suppuration of the attic and aggravation of the old trouble. Adenoid vegetations had been removed on two occasions, with considerable improvement of speech after each operation. There was a marked retraction of the lower jaw, which destroyed the character of the labial sounds, and this had been overcome by practice in protruding the lower jaw when speaking. The soft palate was greatly relaxed and impeded in its action by the adenoid growths. In trying to say "s," instead of the palate rising to the roof of the mouth, it remained down on the tongue, and the sound was made through the nose. After the thorough removal of a large mass of adenoids for the second time, the patient was carefully drilled in articulation until scarcely a trace of the defect remained.

Dr. H. HOLBROOK CURTIS (New York) exhibited the instrument known as the *Laryngo-Stroboscope*, devised by Professor Oertel, of Munich, for viewing the vibrations of the vocal cords. The instrument is constructed on the principle of the well-known siren, and is set in motion by an electromotor. If, for example, the siren and the patient are made to sing the same note—say C—there will be 512 vibrations of the vocal cord per second, and the same number of interruptions of the visual field by the siren; under these conditions the observer will see the vocal cords apparently at rest. By looking slowly from one side of the cord to the other, and properly adjusting the speed of the instrument with reference to the note sung by the patient, the observer is enabled to see the nodes and segments of the entire cord. By this instrument, the speaker said, the usually accepted theories as to the manner of vibration of the vocal cords had been absolutely disproved. With this instrument, the "nodules of attrition" could be seen, and the patient could be taught by a new method to sing in such a way as to remove the vocal difficulty arising from these nodules often inside of a week, even in cases of very

long standing. The patient should be given a suitable note to sing, and should practise singing this note according to a certain method at short intervals every day. In this way a very speedy cure of the nodules themselves is brought about.

Dr. CURTIS also exhibited an *Auroscope* invented by Dr. Müller, of Carlsbad, in which an electric lamp was included in the speculum, which enabled the observer to study the movements of the ossicles under intense illumination, a hand bulb of rubber being attached as in the auroscope of Ziegel.

Otitis Media Suppurativa with an Unusual Perforation of the Mastoid.

Dr. E. E. HOLT (Portland, Me.) reported a case of this kind occurring in a man forty-five years of age, who had begun to have earache on June 22nd, 1895. When seen by the speaker on July 30th there was a perforation on the anterior inferior portion of the membrana tympani through which muco-purulent matter was discharged. He complained at times of pain and tenderness. The ear was treated with cleansing astringent solutions. There was no tenderness or swelling of the mastoid, but there appeared to be a slight prominence in this region. There had been a very slight rise of temperature at times. After twenty-one days of this treatment he had decided to chisel away the mastoid, and on doing so he had found the outer side of the bone sound, but the inner portion extensively necrosed, and a pus track leading into the digastric fossa and down into the inter-muscular spaces in the neck. The speaker deprecated the common practice of dismissing a patient with the simple direction that the ear should be frequently syringed out; it was much safer and better, if the case could not be kept under constant observation, to direct that the ear be kept clean with cotton and not syringed at all.

The PRESIDENT said that these cases opening into the digastric fossa were among the most interesting with which we had to deal. He had recently seen a case very similar to the one reported. Although the temperature had been taken at intervals of two hours, no elevation of temperature was recorded while the patient was under observation. At the first incision pus was evacuated, and it was found that the interior of the mastoid was entirely broken down. The only symptoms of mastoid inflammation in this case were local tenderness and a sinking of the upper and posterior walls of the canal. His own experience had been that patients were apt to infect the auditory canal in using cotton to cleanse the parts. While it was usually unwise for a patient to syringe out his own ear, one of the family could be easily taught to do it properly, and this method of cleansing had always been the most successful in his experience.

A Contribution to the Study of Laryngeal Vertigo.

Dr. A. C. GETCHELL (Worcester, Mass.), in a paper with this title, stated that he had succeeded in collecting forty-one cases. Five of these were over sixty years of age, nine were between fifty and sixty years, thirteen were between forty and fifty years, and the others were stil

younger. One was epileptic, and one had an epileptic brother. Loss of consciousness was expressly stated to have occurred in thirty-two cases, and falls in twenty-six. Slight mental confusion was noted in five; dizziness was mentioned in eight cases; true vertigo was mentioned but once. In thirty-three of the cases it was preceded by cough. Tickling or burning sensations about the larynx were mentioned in thirteen cases; congestion of the face was noted in ten; two were reported as pale; bronchitis occurred in eight cases. Most of the cases had several attacks, although sometimes at quite long intervals. The treatment had consisted in the internal administration of the bromides, and local measures for the abnormal conditions about the pharynx. The speaker said that Charcot had first described the disorder and had given it its name, but this certainly did not give a correct notion of the disorder. The average age of the patients was against the theory of its epileptic origin. If the theory of forced expiration were correct, it would seem that obstruction of the circulation should be noticed prior to the attack. The circulatory condition is probably nothing more than an exciting cause in a limited number of cases. Five of the series had nervous temperament. A history of epileptic seizures was not infrequent. It could not be denied that the fundamental pathological factor is an unstable condition of the nervous system. Brown-Séquard's researches showed that the larynx has an intimate nervous connection with the nervous system. The author's conclusions were: (1) That laryngeal vertigo occurred in persons in whom there is an unstable nervous equilibrium; (2) that there was usually some condition of the upper air passages liable to cause glottic spasm; and (3) that severe paroxysmal coughing may cause syncope, but only when there is existing disorder of the central nervous system.

Dr. SARGENT F. SNOW (Syracuse) said that he had seen a case of laryngeal vertigo or epilepsy in a labouring man, about forty years of age, who was sent to him in 1893. The friend who accompanied him said that for the previous two or three weeks there had been extreme hoarseness and dyspnoea; along with this there were frequent attacks of laryngeal spasm, and a complete loss of consciousness for a period of perhaps thirty seconds. The patient himself was too hoarse and excited to give his own history. During the first examination he lost consciousness five or six times, as a result of the contact of the mirror with the back of the throat. The pharynx and larynx were markedly congested, cords reddened, and arytenoids swollen. His family physician had been treating him with bromides, but without permanent benefit. This, by request, was stopped, and the only treatment he received was in the way of reducing the pharyngeal and laryngeal inflammation. Under this plan of treatment all his symptoms disappeared and did not return. From his history, the symptoms of laryngeal congestion and spasm, the extreme loss of voice, and nice result from treatment, Dr. Snow came to the conclusion that it was a typical case of laryngeal epilepsy, due to an acute inflammation.

Dr. WENDELL C. PHILLIPS (New York) said that the only case of this kind that had come under his notice (*see* "Medical News," March 19, 1892) had been a patient with a well-marked bronchitis with bronchorrhœa.

All the laryngeal attacks had begun with a severe spell of coughing, and then he would fall down and completely lose consciousness for a moment. He had treated the bronchitis with eucalyptol internally; he had also given sodium bromide. There had been no vertigo during attacks, but during a paroxysm there had been sudden and complete loss of consciousness for a few seconds. Patient had described the sensations as pleasurable, and no unpleasant after-effects. Recovery was complete after a few days.

Dr. R. C. MYLES (New York) said that he had seen an interesting case of this kind a few years ago in a man about fifty years of age. This man was subject to attacks of bronchitis and coughing, and at such times would occasionally become unconscious for a moment and then fall. He was a high liver. His diet was somewhat restricted, and treatment directed to the larynx; under this a cure was effected. It should be noted that in all cases of death from impaction of a foreign body in the larynx, the individual falls unconscious with great suddenness.

Deviation of the Nasal Septum. Operation.

Dr. WENDELL C. PHILLIPS (New York) presented a boy who, while playing "shinny," was struck with a stick over the nose. This caused a severe nasal hæmorrhage, which subsided without special treatment. Seven months later he had been first seen by the speaker. Examination showed almost complete occlusion of both nostrils, as if the blow had caused the septum to be driven back upon itself, or split and forced in both directions. Four weeks ago he broke up the septum completely with the Adams forceps under ether, and introduced the perforated cork splints devised by Dr. Berens. It was necessary to use two on account of the bilateral obstruction. There was still a little thickening of the septum, but scarcely enough to interfere with breathing, and the case might be considered satisfactory.

Dr. C. W. RICHARDSON (Washington, D.C.) said that he had operated upon a number of cases of V-shaped deflections of the septum, but he had found in ninety per cent. of the cases that the septum would drop back into the old position. Since he had used the perforated splints of Dr. Berens the result had been very good. The reaction from the introduction of these splints usually subsided in three or four days.

Dr. D. L. HUBBARD (New York) said that the great point was not to be in a hurry to remove these corks. He had frequently left them in ten days without any harm. Another point was not to leave out the corks permanently too soon. He had found that relapse had sometimes followed removing them after four weeks, but never if they had been left in for six weeks.

Dr. HOLBROOK CURTIS said that he considered this splint the most scientific and useful of the splints devised for this purpose. After doing one of these septum operations lately, he had been surprised to find that the patient was a "bleeder." The hæmorrhage was stopped by a very light plugging with styptic cotton. He believed that light plugging and pressure with a flat copper wire at the right spot constituted the best

method of checking such hæmorrhage, if the splint itself did not accomplish this result.

Dr. E. W. DAY (Pittsburg) said that once while operating under ether he had met with a tremendous arterial hæmorrhage after the first incision of the septum, and the patient had nearly lost his life from it. He preferred now to operate under local anæsthesia.

Dr. PHILLIPS, in closing the discussion, said that Dr. Asch recommended cutting the septum at the point of greatest deflection, by means of a specially devised pair of knife-scissors, making an incision like this, +, then breaking up with the finger the four resultant segments, and following with complete breaking up with Adams forceps. The trouble in Dr. Day's case was probably that he cut too close to the floor of the nostril. In ordinary cases he saw no necessity for using two splints, and had seen ulceration and perforation of the septum result from undue pressure, brought about by the prolonged use of *two* splints.

Dr. MYLES presented a *Case for Diagnosis* which exhibited some of the features of actinomycosis bovis. It had been under his observation only a few days. He said that he had seen several cases of true actinomycosis bovis, and most of them had been examined microscopically, so that there could be no doubt about the correctness of the diagnosis. They had been cured by extirpation of the growths. The growths appear hard, tough, and leathery, like the lichen on wood.

Report of a Case of Hæmorrhage from the External Auditory Canal.

Dr. C. W. RICHARDSON (Washington, D.C.) reported such a case. The patient was a woman, thirty-six years of age, who had at first hæmorrhages lasting for a day or two, and recurring at intervals for a week or more. This continued for a period of six months. In February, 1895, the bleeding became profuse and persistent. It had no reference to the menstrual function. Examination showed no solution of continuity throughout the whole canal, or of the membrana tympani. The Eustachian tube was patulous. Pain was experienced throughout the whole history of the case, particularly in the region over the mastoid and about the auricle. After several months of observation he had become convinced that the patient was neither hysterical nor a malingerer. The exact source of the hæmorrhage could not, however, be determined; although, in all probability, issuing from the ducts of the ceruminous gland.

Dr. POOLEY referred to a case of hæmorrhage from the auditory meatus which at first was puzzling, but it was finally found that the blood issued freely from a perforation in the drumhead. Further examination showed petechial hæmorrhage in different parts of the body, and the diagnosis of scurvy was made. The case terminated fatally, and the autopsy showed the usual conditions found in scurvy, including petechial hæmorrhage into the brain.

The PRESIDENT said that the tenderness along the trigeminal distribution would seem to indicate that the case reported was of the nature of herpes—in other words, that the hæmorrhage occurred through some interference with the nutrition of the walls of the blood vessels. A somewhat similar condition was found among gouty individuals.

Dr. RICHARDSON said that the blood had been examined, but with negative results. There was no indication of scurvy in his case, or of the hæmorrhagic diathesis, as the patient had been operated upon previously for pelvic growth without the occurrence of unusual hæmorrhage.

Hysterical Affections of the Mastoid.

Dr. J. E. SHEPPARD (Brooklyn) read a paper with this title. The first case reported by him was that of a girl, eighteen years of age, in poor health, who came to him with the history of deafness for three years, and of pain and tenderness around the right ear for the past three weeks. Bone conduction was better than ærial. If the patient's attention was diverted, firm pressure could be made over the part without causing pain. The patient was given sodium bromide, and in a few days was well. The second case was that of a young woman, twenty-one years of age, who had fallen down an elevator shaft. Recently she had felt dizzy, and had exhibited a tendency to fall backward to the right side. She complained of pain around the ear. The mastoid region appeared to be tender, but not at all œdematous or swollen. A proposition to operate did not lessen her symptoms at all, and for several days he had been in doubt as to the correct diagnosis. Two séances of partial hypnotism produced a cure. The third case was a woman, twenty-three years of age, who stated that for the past few months, following a cold, she had suffered from pain in and around the ear, without any discharge. Examination showed no evident cause, and the diagnosis was made of hysteria, and her attending physician was advised to treat the case by "suggestion." He had been unable to learn the outcome of this case.

Dr. RICHARDSON said that not long ago he had operated upon a case of this kind. The patient was a young woman, about eighteen years of age, who had been treated six years ago for suppuration of the right ear. When seen again the ear was once more suppurating, and there was extreme tenderness over the mastoid region. She had become hysterical as the result of grief over the death of her mother. There was no œdema or redness over the mastoid, but it was well known that there were cases of serious mastoiditis without the usual signs. After waiting about two weeks he had opened the mastoid cells, only finding them perfectly normal. The patient was, however, completely cured. The differential diagnosis when suppuration exists in the middle ear of the affected side becomes exceedingly difficult.

Dr. MYLES referred to the case of a young lady, in most comfortable circumstances, who had suddenly developed extreme tenderness in the mastoid region. The girl was hysterical, and he had some reason to suspect that she purposely irritated the ear. The girl was greatly pleased with a proposal to open the mastoid, but after consultation this was postponed, and the patient recovered without further treatment.

Dr. PHILLIPS recalled a case of recurrent furunculosis of the canal, and finally of severe pain and tenderness in the mastoid, lasting three or four weeks. She complained of the pain so severely that she was admitted into the hospital, and preparations made for opening the mastoid. Ice coils were used and leeches also, but the tenderness still existed, and she

said she could not sleep. There was no swelling at any time, and finally the apparent tenderness became so general over the affected side that no operation was performed, and at Dr. Terriberry's suggestion she was given Warburg's tincture in full doses ; she was relieved and discharged. A few days later she returned in great pain, and an examination of the canal showed about five-eighths of an inch of the point-end of a pin and several pieces of finger-nail near the drum. When confronted with this she was greatly surprised, but denied all knowledge of it ; but it was evident that she had forgotten this time to remove the cause of her self-inflicted torture. It was also learned that she had been forced to earn her living, and had no doubt taken this method to avoid work.

Dr. J. E. H. NICHOLS said that, in one case which he had seen, the mastoid cells were healthy, but the patient had been cured at once by opening them. In another case, in which there was an excoriation of the anterior wall of the canal, and in which he suspected that the hæmorrhage complained of had been produced by pricking this spot with a pin, hypnotic suggestion was only temporarily beneficial, but a proposal to operate was sufficient to effect a cure. It was not at all improbable that there might be some elevation of temperature in these cases, thus still further obscuring the diagnosis, but ordinarily this elevation would be slight.

The PRESIDENT remarked that in this discussion nothing had been said about the result obtained by comparing the two sides. In hysterical cases, in which pain was complained of on one side, there was usually much tenderness on the other side. He recalled a case in which at each menstrual epoch there would be a marked œdema and tenderness over the mastoid. Such a condition must be looked upon as angio-neurotic in character.

Pharyngeal Tuberculosis.

Dr. ROBERT LEVY (Denver, Colo.) said that he had preserved records of one hundred and sixty-two cases of laryngeal tuberculosis. Of this number, seventeen showed pharyngeal tuberculosis. Ulceration of the hard palate was the least frequent. The severity and course of this affection depended upon the number and location of the areas affected. When several points of attack develop simultaneously, or there is an extensive process going on in the lung, the process is rapid ; when the posterior wall alone is involved, extension is slow. The co-existence of syphilis he considered to be the most important modifying circumstance. The stages of pharyngeal tuberculosis depended upon the mode of infection. When the infection occurred through the lymph channels, pallor, infiltration, tubercles, ulceration seemed to be the method of attack ; where there was a local invasion, there would be an acute pharyngitis, the development of superficial pin-head tubercles, no diffuse infiltration, ulceration. The diagnosis was not difficult in typical cases. In those complicated by syphilis the character of the ulceration might be puzzling ; there would usually be slight pain, and the case would pursue a sluggish course. The finding of tubercle bacilli, the condition of the lungs, and the result of treatment would enable one to make the

differential diagnosis. Nitrate of silver, forty grains to the ounce, was useful in the early stage, when the ulcerations were few and small. Curettement and lactic acid had given him fair satisfaction, but the galvano-cautery had proved to be the best of all the agents he had employed. Cocaine spray and iodoform insufflation were valuable for home treatment. When combined with syphilis his experience was in favour of the use of mercury and small doses of iodide of potassium, rather than large doses of the latter. He had been forced to the conclusion that the Colorado climate was unfavourable to pharyngeal tuberculosis. His conclusions were:—(1) That pharyngeal tuberculosis occurred in one and a half per cent. of all cases of phthisis. (2) That there are two sources of infection: (*a*) local attack on an abnormal mucous surface, and (*b*) through the lymph channels. And (3) that the severity of the symptoms was modified by the site of the attack, and the existence of laryngeal and pulmonary complications and the association with syphilis.

Diseases and Treatment of the Nasal Accessory Sinuses, with an Analytical Report.

Dr. ROBERT C. MYLES exhibited some drawings taken in a darkened room in 1893 by means of transillumination. These had been presented to the Academy of Medicine in 1893. In polypoid cases he had entered the sinuses through the nose many times. About two-thirds of the cases of ethmoid disease were due to polypoid disease, and one-third to atrophic rhinitis, non-syphilitic necrosis, syphilis, and neoplastic growths. At the present time he had three cases of sphenoidal empyema under treatment, and he had come to the conclusion now that the nose and teeth were about equal as causal factors of antrum disease. The simple irrigation tube and small trocar and canula he considered invaluable aids to diagnosis. Less depends upon the pathology than upon the extent of the pathological process. He thought it was the physician's duty, in all acute and sub-acute cases of catarrh, to employ either expectant or exploratory treatment. Exploration in antral cases is carried out by irrigation through the natural opening, or through a small artificial one. There were hundreds of cases of sinusitis with muco-pus in which there was no solution of continuity of the membrane. He had operated by almost every method that had been recommended, and all the milder cases had done well. He recalled a case which terminated fatally in which death might have been averted by an operation, which the patient had refused. He had adopted the rule of operating externally in frontal sinus disease when the symptoms were profound, and were not relieved by other methods. In extreme polypoid cases the ethmoid was rather brittle; it was almost flinty hard in the suppurative cases. After removal of the middle turbinated bone it was his practice to drill or gouge an opening into the cells, and cut away as much of the cells as possible. All his cases had been relieved in this way, and some cured. The sphenoid cells were not so difficult to open as many seem to think. He did not believe curetting the upper and posterior wall of these sinuses was safe. The cells were from one to one and a half inches in depth.

He did not agree with the general surgeons that the antrum of Highmore should be treated as other diseased cavities are treated. Curetting often aggravated rather than helped the condition. Where the tooth appears to be the cause of the trouble he advised removal of the tooth, and penetration through the socket into the antrum. This method was so simple and harmless that it should be made a part of the expectant treatment.

Dr. PHILLIPS said that he quite agreed with the reader of the paper regarding the etiology of antral disease. He found that the dental profession was very much inclined to follow the teaching of Garretson, that almost all antrum cases were due to some defect in the teeth or in the bone. In his opinion catarrhal inflammation of the antrum was not an infrequent disease, but suppurative inflammation of the antrum was more rare. He did not think it necessary to remove a tooth if the teeth were perfectly sound; it was better to penetrate through the canine fossa. His most recent case had been one without complication from teeth or jaw. The only symptom complained of was that daily, at about ten o'clock, he had a quite free discharge of slightly offensive pus from his right nostril. It was learned his occupation was that of a watchmaker, and that while at work he bent his head downwards and forwards. This condition had lasted about a year, and had followed a cold. Examination of nose was negative; percussion over the antrum of the affected side elicited some tenderness as compared with the opposite side. By transillumination he had found that there was a bright area underneath the eye on the left side, and a very dark shadow underneath the eye on the right side.

Some observers claimed that transillumination was unsatisfactory, but the reason usually was that it was not properly performed. The observer should note the character of the illumination beneath the eye, the appearance of the light low down being always negative. He would be unwilling to operate in a case with darkness on one side and light on the other side, unless there were other symptoms of antrum disease, but in this obscure case the transillumination had been most helpful. Transillumination is a useful aid, but should not be considered in itself sufficient ground for a positive diagnosis. Cocaine cataphoresis was used in this case, with a current of fifteen volts. A free opening was made into the antrum, and according to the statement of the man the operation was painless. There was a free discharge of pus. Last summer he had seen a man who had rapidly developed an acute sinusitis in the frontal sinus, together with extensive suppurative periostitis over the frontal region, following a violent insufflation of powder on that side. This insufflation had been done by one of the advertising quack catarrh cures in this city. Patient also gave a clear syphilitic history. He had extensive polypoid development in both nares. An external incision had been made to relieve the extensive cellulitis, and pus was found, and a final sinus into the cavity was left, which had continued to discharge. This was underneath the supra-orbital foramen; operation was consented to, and he had followed Dr. Myles' plan of making the incision. As soon as the opening was sufficiently large the polypi forced themselves out through the opening that he had made in the frontal sinus. He removed nearly half an ounce

of polypoid material from the sinus and packed with iodoform gauze, and the usual treatment was carried out. Scarcely any deformity followed this plan of opening the sinus. Recently he had been operating upon a cadaver of a coloured person, and had been surprised at the extreme smallness of the sinus. It did not extend beyond the supra-orbital foramen, and an attempt to have entered this sinus by the nose would no doubt, have entered the cranial cavity.

Dr. G. H. MAKUEN said that a few weeks ago he had reported a case of unusual alveolar abscess with antral complications. The patient had complained first of pain around the second molar tooth in the upper jaw on the right side. After two or three days a slight sero-purulent discharge made its appearance between the gum and the tooth. A dentist who saw the case gave it as his opinion that the case was one of alveolar abscess. On opening the tooth he found it apparently healthy. The tooth was devitalized and the pulp removed, but without benefit to the patient. Shortly after this, while probing, the dentist passed his probe into the antrum. On removing the tooth a small pus sac was found midway on the tooth. This sac was half an inch from any infection by way of the mouth, and certainly no infection could have come through the antrum. His experience had been that, when a large opening was made at the floor of the antrum, the cavity did not drain through this opening unless there was an obstruction of the natural opening. He suspected that the movements of respiration caused a suction through the nose, and thus accounted for drainage taking place against the action of gravity.

Dr. E. E. HOLT said that he desired to express his high admiration of this paper from the standpoint of the ophthalmologist and otologist. In cases of orbital cellulitis one was often brought into contact with the antrum of Highmore.

Dr. DAY said that he had found quite a number of cases in which transillumination showed a shadow on both sides, and sometimes on one side, without any other indication of antrum disease. He had, therefore, become somewhat sceptical as to the value of transillumination in diagnosis.

Dr. MYLES, in reply, said that there were thousands of people in this country who had been suffering for years from catarrh, and from antral disease, and yet they had been treated by very competent physicians. The remark that had been made about the smallness of the frontal sinus reminded him of the fact that some coloured people seem to have no frontal sinus, or only a very small one. It was an easy matter in such cases to make an opening directly into the cranial cavity, inadvertently, while operating. In his experience, most of the cavities of the nose appeared to drain by a to-and-fro motion of the air, due to the respiratory movements. Regarding the matter of transillumination, the speaker said that hundreds of people presented a dark shadow beneath the eyes, but in almost any case the shadow could be made to disappear by the use of sufficiently powerful illumination. There were many drawbacks to transillumination, but it was, nevertheless, a very valuable aid to diagnosis and one which should not be neglected.

Acute Otitis Media as a Complication of Typhoid Fever.

Dr. D. A. HENGST (Pittsburg) read a paper on this subject. He said that when we considered the convenient pathway for microbes through the Eustachian tube to the ear, it was not surprising that this affection was so common. As a result of a collective investigation that he had made, he had received reports of 1228 cases of typhoid fever, 575 of which were from private practice and 653 were hospital cases. There were eleven cases of otitis media reported among the former number, and seventeen from the latter. Out of 389 cases of typhoid fever occurring in the John Hopkins Hospital, it had been reported that there were eight of acute otitis media. It most commonly developed from the end of the second to the fourth week, or at the time when the capillary circulation was sluggish and the patient in a semi-comatose condition. He had not been able to gather statistics regarding the frequency of mastoid complication. In connection with the question of the influence of quinine on the production of otitis media, it should be noticed that one physician who reported 175 cases of typhoid fever, with five of otitis media, stated that it was his practice to use large doses of quinine during the stage of hyperpyrexia. The most useful method of extension was from the mouth or naso-pharynx into the ear. The chief symptoms of this complication were deep-seated pain and tenderness on pressure below the auricle, a feeling of pulsation, and also tinnitus. In some cases of typhoid fever there is severe neuralgic pain in the ear, but there is no deep-seated pain on pressure below the auricle, and the accompanying changes observed on examination with the speculum are not present. If seen early, or in the hyperæmic stage, leeches should be applied to the tragus, and the instillation of a warm solution of boric acid will often be followed by prompt relief. The ear should be frequently cleansed, and as soon as bulging is observed the membrane should be incised. The parts should be kept thoroughly aseptic afterwards. In nearly all cases of otitis media complicating typhoid fever, good hearing has been the result.

The PRESIDENT said that he certainly thought acute inflammation of the middle ear was a very rare complication of typhoid fever. He did not believe in the use of moist heat in the early stage of the inflammation, because this tended to break down tissue. In his experience dry heat relieved the pain quite as well as moist heat, and was free from the objection just stated. He would also favour incision of the drum membrane before the membrane bulged, as the object was largely to secure depletion. A great variety of germs appear to be responsible for acute inflammations of the middle ear.

Ulceration of the Nasal Septum.

Dr. T. C. CHRISTY (Pittsburg) read a paper with this title. Five cases from his private clinic were given in detail. He said that the onset of the trouble was usually attributed to taking cold, followed by pain over the frontal region, obstruction of nares, painful vision, abolition of sense of smell, and by pain in one or both ears. There were usually signs of acute inflammation over the obstructed nares. In the majority of these cases the lesion originated on the septum, and was communi-

cated to the swollen soft parts by contact. The sodden, macerated appearance of the tissues involved, the thick, slimy discharge, tendency to hæmorrhage, the marked physical depression of the patient, were among the more prominent symptoms. In one case only was there evidence of specific infection. In one case there was inflammation of the septal cartilage with necrosis of the alveoli of the central incisors, resulting in a sinus communicating with both nares. There was no appearance of infection outside of the nares except in one case, causing acute laryngitis, with threatened periostitis of hard palate. In no case was there destruction of the hard palate, as so frequently occurs when the septum nasi is involved. Constitutional remedies, even in small doses, were poorly tolerated in those cases of great physical depression. The galvano-cautery is not a valuable agent in the treatment of these lesions. Tubercular ulcers are, as a rule, secondary, slow in development, and painful. Malignant ulcerations are painful, and often of an inflammatory appearance and primary origin. Luetic ulcers do not invariably bear the typical impress. The nasal septum is exceedingly vulnerable to the pernicious influence of the acute and chronic infectious diseases, and in a lesser degree to any atrophy and excision of its mucous surface by reason of disease or traumatic injury. His observations led to the conclusion that prolonged residence in high altitudes was, in some instances, pernicious to the delicate mucous covering of the septum nasi.

Dr. LEVY said that he must take exception to the statement that prolonged residence in high altitudes was pernicious to the nasal mucous membrane. In an experience of twelve years in a region situated over one mile above the level of the sea, drying, crusting, and annoying nasal symptoms had been observed most often among those who had recently arrived. After a time nature met the demand for rapid evaporation of water at such high altitudes, but at first these individuals usually suffered from dryness and excoriation from picking the dried secretions.

Dr. ARTHUR G. ROOT (Albany) said that he knew of no disease which was so amenable to treatment as specific disease, whether in the nose or in any other part of the body. He was firmly convinced that many physicians were disappointed with the results of their antispecific treatment because they expected marvellous benefit from simply giving of these remedies, without taking into account the general condition of the patient and what could be obtained by careful hygiene and good nourishment. Some of these patients would be better for a time if the antispecific remedies were suspended, and reliance placed entirely in hygiene and diet.

Dr. SNOW said that in these cases of tertiary syphilis much of the trouble in managing the case was due to insisting upon the use of mercurials, instead of trusting entirely to the iodide of potassium. He stated that he had yet to see a case of ulceration due to the later stages of syphilis that could not be controlled by iodide of potassium, pushed to the point of intolerance. In cases of ulceration of the septum, not due to syphilis, he found that careful applications of deliquesced chromic acid acted admirably.

Dr. HOLT said that he desired to heartily endorse what had been said by Dr. Root about the hygienic treatment of syphilitics. In many cases he had got better results from iodide of sodium than from the iodide of potassium, the former being better tolerated by the stomach.

Dr. W. B. JOHNSON (Paterson, N.J.) thought it was somewhat dangerous to undertake to feed up a syphilitic patient, and suspend medication while the disease was actively engaged in dragging him down. He was positive that the combination of iodide of potassium and mercury often acted better than iodide alone.

Dr. MAKUEN said that in the past year he had two such cases, in which the diagnosis had been rather difficult. The first was a young woman in whom there was no suspicion of syphilis. A pathologist reported that the case was one of round-cell sarcoma, but the operation being unavoidably delayed, the patient was put on antisyphilitic treatment and was speedily cured. In another case—that of a man who denied syphilis—he was still in doubt, but was trying antisppecific remedies.

Dr. LEVY said that he was reminded of a case in which two microscopists had independently examined the case, and had reported it to be one of round-cell sarcoma. This patient had had many of the symptoms of a malignant growth, yet she was speedily cured by antisyphilitic treatment.

Dr. CHRISTY, in closing the discussion, said that the object of his paper was to emphasize the importance of preserving in every way possible the integrity of the mucous membrane of the nose in all cases, whether surgical or non-surgical.

The Mastoid and Intracranial Complications of Middle Ear Suppuration.

Dr. EDWARD B. DENCH (New York) read a paper with this title. In describing the operative treatment of mastoid disease he said that he considered that a mastoid operation, done with proper attention to technique, was perfectly justifiable as an exploratory procedure, and was devoid of danger. He had operated upon 105 cases of mastoid disease, of which five had died. Three of these were cases in which meningitis, occurring before the operation, was the cause of death. The other two were due to prior cerebral abscess.

In this large number of cases, therefore, not a single death could be attributed to the operation. An absolutely perfect asepsis should be secured, as much care being taken as in preparing for an intraperitoneal or an intracranial operation. The incision was ordinarily made about half an inch behind the auricular attachment, but personally he preferred to begin the incision at the tip of the mastoid, and then carry it toward the insertion of the auricle, following this line close—at a distance of about one-eighth of an inch. The incision should be carried up to the superior attachment of the auricle. Within the triangular space bounded by two tangents, one drawn to the superior wall and the other drawn to the posterior wall, and the curvilinear border of the meatus between the points of tangency, lay the region in which the antrum could be entered with safety. Drilling should be abandoned, and the opening into the

bone made by a chisel. So far as he knew, E. Gruening had been the first to lay down definite rules for the systematic opening of the mastoid. The first objective point in the operation should be the mastoid antrum. After a probe had been passed from the antrum into the middle ear it was necessary to remove the tip of the mastoid and thoroughly explore all the pneumatic spaces of the process. The *aditus ad antrum* should be carefully curetted, for otherwise the discharge from the ear was apt to persist after the wound had healed. If the incision were made too far behind the auricle the ear was apt to remain displaced forward for a long time. This was not the case when the incision was made as recommended. In applying the dressing the bone cavity alone should be packed, the margins of the wound in the soft parts being allowed to approximate. If there were no pain or elevation of temperature, he allowed the first dressing to remain unchanged for from five to seven days. If the lateral sinus should be opened the hæmorrhage could be easily controlled by firm packing with iodoform gauze. The speaker also reported a successful case of operation in a patient having leptomeningitis. An incision had been made from the tip of the mastoid over the ear to the external angular process of the frontal bone. He had then entered the middle cranial fossa through the squamous portion of the temporal bone. There was a distinct meningitis present at this time, the lesion being most marked over the tympanic roof. There was no purulent accumulation found either in the region of the roof of the tympanum or the lateral sinus. The wound was packed in the region of the tympanic roof, the two extremities of the incision being closed by sutures. The man had no further trouble, and recovery had been prompt. In doing an ordinary exploratory operation an ample cutaneous incision should be made, and the middle fossa entered through the squama, over the external meatus. In a second case, in which the symptoms did not at first seem to indicate extensive mastoid involvement, evidences of thrombosis of the lateral sinus appeared suddenly. The patient had a severe chill, the temperature rose to 105.8° Fahr., and there was intense headache, delirium, and marked prostration. The febrile movement was followed by a spontaneous fall of temperature to about 99° Fahr. In a few hours the temperature again began to rise, and immediate operation was deemed imperative. The lateral sinus was exposed, and was found to be filled with a firm clot. This was removed by means of the curette until free hæmorrhage occurred from both the upper and lower ends of the incision in the sinus. The sinus was exposed, and incised from just above the jugular bulb to within about an inch and a half from the torcular Herophili. The entire wound was packed with iodoform gauze and the usual antiseptic dressing applied. There was no subsequent rise of temperature, and a perfect recovery followed.

Dr. R. C. MYLES said that during the last few years he had been studying this subject, and had operated between one and two hundred times on the cadaver. The points made regarding the method of making the incision and reaching the antrum were particularly valuable. He raised the question as to whether we should chisel at the upper level of

the osseous margin or at the centre. His plan was not to destroy the upper posterior part, but to expose the cells just posterior to the osseous canal, and extend the opening in a spiral manner upwards, inwards, and forwards through the antrum into the attic. The approach to the lateral sinus could usually be determined by the great hardness of the bone and the bluish colour of the part.

Dr. W. B. JOHNSON said that there were times when it was very difficult to secure absolute asepsis. He had been greatly interested in the case of leptomeningitis which had recovered after operation, yet he felt that it would be extremely rare for recovery to follow in cases in which meningitis or cerebral abscess existed prior to the operation.

Dr. R. FROTHINGHAM (New York) remarked that some very good operators still used the drill, and that it could hardly be classed as a "relic of barbarism." Neither did he think that, even if all aseptic precautions are carried out, surgeons can feel safe if they accidentally expose or enter the lateral sinus or cerebral cavity, as when they confine their operations to the mastoid cells.

Dr. DENCH, in closing the discussion, said that some operators used the burr, but that this was employed for a very different purpose from that for which the drill was used by the earlier operators. The object in the old "drill operation" was to simply enter the antrum through the cortex, no attempt being made to remove the carious bone.

Dr. ARTHUR G. ROOT (Albany) presented a *Case of Bilateral Hæmorrhage from the Labyrinth through the External Auditory Canal due to Cranial Fracture.*

On November 4, 1895, the patient was working on a scaffold about fourteen feet from the ground. This suddenly gave way, and he fell on his forehead. When found he was not unconscious, but was unable to rise. He was bleeding from a contused wound on the right side of his forehead, and no fracture was found. Soon after arriving at hospital he became unconscious, vomited, and soon sero-bloody fluid escaped from the ear and from the nose. He says when he fell his hearing left him. Remained in bed for about fourteen days; was semi-unconscious for about forty-eight hours. He complained of severe headache for first week. This headache was principally located in the occipital region and back of neck; it then became spasmodic. He complained of cold feet most of the time. Every time he rose in bed he became dizzy. After second week he sat up some, but was not able to get about much. He slept continually, breathing stertorously. Toward the last he would awaken, and complained of troubled dreams he had while asleep. At present he has buzzing in the ears, like waves of water and like steam. When these noises stop he hears vibrations as of a train of cars. The principal features of interest are that the loss of hearing is absolute upon both sides; further, there seems to have been at no time any involvement of either facial nerve.

Diagnosis: Fracture at base, with hæmorrhage into the labyrinth upon both sides.

Robert E. Myles.

ANNOTATIONS.

ON GARGLING ACCORDING TO THE METHOD OF VON TRÖLTSCH.

By PROF. GUYE (Amsterdam).

IN the March number of this journal I see in the proceedings of the British Laryngological, Rhinological, and Otological Association a suggestion by Lennox Browne *to abolish gargling in the treatment of diseases of the throat*. Now, I am not of Mr. Browne's opinion as to the uselessness of gargles, but I do not think a discussion on gargling in general would promise to be very fruitful, as positive proof in therapeutical questions is very difficult to obtain. But Browne mentions in his paper the method of Von Trölsch, and the directions which he gives for it differ importantly from those given by Von Trölsch himself. I consider we owe it to the memory of Von Trölsch to state this difference.

Von Trölsch prescribed the following method :—"Sit, or rather lie down, with the head thrown back ; take a mouthful of the gargle, and make the movements of swallowing without letting the liquid go down the throat."

Mr. Browne says :—"Take a mouthful . . . ; then, closing the nose with the finger and thumb to prevent entrance of air, open the mouth and make the movements of swallowing," etc.

The direction to close the nose was never given by Von Trölsch. I looked up the subject in the sixth German edition, Leipzig, 1877, p. 372 ; but I do not know if the mistake has been made in an English translation, in which case the Italian proverb, *tra-tuttore, traditore*, would find its application. If not, of course the unwilling "traditore" is Lennox Browne.

Making the movements of swallowing whilst closing the nose with the finger and thumb is to perform Toynbee's experiment—a method by which air is pumped out of the middle ear, as is very easily demonstrated by inserting a small manometer into the meatus.

This method is very injurious to the ear, and it explains the fact that some patients with impaired permeability of the nose are more deaf after each meal. I once had a patient who, from this cause, could hear hardly at all whilst eating ; and being in the habit of dining daily with a few fellow-students, and finding that he could not enjoy their society while eating, he finally resolved to dine beforehand, and then to sit and enjoy the conversation of his friends during their dinner.

I quote this case simply as an example of the injurious effect of swallowing with the nose closed, and if this was Von Trölsch's method of gargling it should be condemned. But it is not so, and I for my part would make the suggestion "not to abolish gargling," but to use it as an adjunct to other local treatment ; to reserve, perhaps, Von Trölsch's method for chronic cases ; and, lastly—a point in which I fully agree with

Browne—to use only harmless ingredients. (To my own satisfaction, and mostly to that of my patients, I generally prescribe a solution of about half per cent. of chloride of ammonia, with about one per cent. of salt.)

It is rather remarkable that, according to Von Tröltsch, Celsus already recommended gargles in ear disease, although it is not known that he knew anything of the Eustachian tube.

LATENT EMPYEMA OF THE MASTOID ANTRUM.

Dr. PAUL RAUGE, in an article on "Otitis and Mastoiditis" ("Bulletin Médicale," June 24th, 1896), draws an interesting analogy between suppurations of the mastoid antrum and those in the antrum of Highmore. Just as of late rhinologists have learnt to recognize latent empyema of the latter cavity, so, says Dr. Paul Raugé, aurists now see in many cases of prolonged intractable suppuration of the middle ear a latent empyema of the mastoid antrum. In the typical cases there are "no phenomena of retention, pain, no swelling, no fistula, no abscess of the soft parts—nothing but a simple discharge, which is so much the more insignificant that it reaches the orifice of the meatus mixed with the discharge from the tympanum, and that it is very difficult to recognize how much in the total of the otorrhœa is due to the tympanic cavity and how much to the mastoid." He attaches little or no value to the lamentable attempts which have been made within the last few years with the laudable intention of arriving at the detection of pus in the mastoid cavities: percussion (Koerner, Moos, Eulenstein); transillumination (Caldwell, Urbantschitsch) by means of an electric lamp introduced into the meatus or applied on the posterior surface of the mastoid; exploratory puncture (Ferrer); lastly, auscultation of the mastoid by means of an otoscopic tube applied to different points on its surface while a tuning-fork vibrates on the vertex (Okunnef)." He holds "that the existence of this suppuration can in reality only be determined by a somewhat uncertain collection of probable signs: increase of discharge, slight painful tension, some general symptoms, These are the least vague of the indications which lead to a suspicion of a latent mastoiditis." He concludes that "whenever an otorrhœa persists and proves intractable to simple treatment, one may almost certainly affirm that the mastoid is affected. Operators know it well, and they are so certain that by perforating the mastoid they will find what they are looking for, that they no longer make a useless *détour* (Schwartz, Luc, Zaufal). Instead of entering through the meatus and timidly following the course that the pus has taken, they attack the antrum straight away, ready to return on their steps and to carry their operative procedure as far as the tympanum, when the extent of the lesions—as is most ordinarily the case—requires a complete operation."

The dangers of analogy are well known, and it would be, in our opinion, somewhat risky to be led by this specimen of that figure of speech—to apply, in consequence, identical principles of treatment to the case of the mastoid antrum when it must be admitted the circumstances are

considerably different, and the risks attending the operation so very much greater. At the present time the indications for opening the mastoid antrum on account of chronic otorrhœa, as such, can certainly not be said to be complete, but Dr. Raugé's analogy is in many respects a happy one, and in time we believe its correctness will force itself more and more on the minds of otologists. It cannot, however, be accepted as a practical guide until it has been tested by actual clinical results—not simply by *a priori* conviction.

Dundas Grant.

ABSTRACTS.

DIPHTHERIA, &C.

Bazin, A. T.—*Diphtheria: Notes on Treatment by Antitoxin.* "Montreal Med. Journ.," Apr., 1896.

THIS paper, which deals with a series of 103 cases treated with antitoxin, ten of which ended fatally, contains several points of much practical interest. The author considers that it is better to give an over than an under dose, inasmuch as any toxin remaining unneutralized by the first injection speedily increases to the amount originally present. With regard to the local lesion, it is usual to have the throat perfectly clean in four days, and the author lays stress on the importance of using sprays of bland solutions as soon as the membrane has ceased to be thick and dirty; more powerful applications, such as peroxide of hydrogen, having a tendency to cause persistence of membrane.

Whereas in diphtheria not treated with antitoxin the percentage of albuminuria is from 50 to 70 per cent., only 36 of the series of 103 exhibited this complication, and in only five of these was any increase of albumen noticed after injection. In only two cases did pains in the joints occur with the erythematous or urticarial rashes. Of 50 cases traced, twelve suffered from paralysis. In the case of a nurse full doses of antitoxin were administered twenty-four and thirty-eight hours respectively after the onset of faucial symptoms, with rapid recovery. On the seventeenth day paralysis of the palate and neuritic pains in the limbs supervened and persisted for a month.

Ernest Waggett.

Nyulasy, Frank A.—*Diphtheria in an Infant eleven months old; Tracheotomy; Antitoxin; Recovery.* "Australasian Med. Gaz.," March 20, 1896.

IN this infant tracheotomy for diphtheria was successfully performed at probably an earlier age than in any previous case in the colony.

Antitoxin was injected on the second day after the larynx had become involved. The same night the condition was such as to demand tracheotomy. After the membrane had been removed from the trachea the breathing was easy. The following morning there was a little dyspnœa and an absence of secretion. In consequence of the ominous character of the latter feature a full dose of Behring's No. 2 serum was injected. Tracheal secretion became free the next morning, and a piece of membrane an inch long was coughed up, giving great relief. A full dose of No. 1 serum was now injected, after which the child gradually improved and is now quite well. The tube was removed on the fifth day after operation. The author attributes the ultimate cure of the diphtheria to the use of antitoxin, for in his experience a "dry tracheotomy" was formerly always fatal. *A. B. Kelly.*

Sørensen (Copenhagen).—*Antitoxin Treatment in Diphtheria*. "Hospitals-Tidende," 1896, No. 4.

THE author, who is physician to the Copenhagen Fever Hospital ("Blegdams Hospital"), publishes in this article statistics of three hundred and eighty-five children with diphtheria without stenosis of the larynx, and eighty-seven children with croup, treated in the above-mentioned hospital with or without Behring's antitoxin, from October, 1894, to the 1st of May, 1895. Excluding moribund patients and infants with pneumonia, sixty-three children of the first group of three hundred and eighty-five children were treated with serum. All these cases were more or less severe. The mortality of these cases was thirty-three per cent., which was also the exact mortality of the severer cases treated without serum. The author's conclusions are as follows:—The cases treated with serum did not show any improvement over the cases treated without serum, either as to the course of the disease or to its duration. Hæmorrhagic diathesis and diseases of the kidneys seemed rather to appear more frequently in the cases treated with serum, and exanthemata, accompanied by fever, were observed now and then in this group of cases. Serum was tried in eighteen cases of croup, and did not seem to have influence on the course of the disease, and all the severe cases of croup ended fatally, while the favourable results could be attributed to the benign character of the epidemic.

Holger Mygind.

Diphtheria and Coryza.—"New York Med. Times," May, 1896.

RECENT experiences in the treatment of diphtheria have shown that coryza in a child is a very fertile field for the propagation of the Klebs-Loeffler bacillus; the City Board of Health of Brooklyn require all school children having coryza to be examined. Cultures are made from the secretions by the city bacteriologist.

A. B. Kelly.

NOSE, &C.

Joal.—*Laryngeal Congestions of Nasal Origin*. "Rev. de Laryng.," April 11, 1896.

THE author refers to a previous paper of his, published in 1884, on "Laryngeal Fluxions," in which he had neglected to give importance to the nasal factor. He discusses laryngeal congestions proceeding from one or other of the following causes: 1, more or less complete obstruction of the nose; 2, propagation of vasomotor disturbances of nasal origin; 3, reflex action consecutive to the erection of the cavernous tissue; 4, lowering of the respiratory capacity by nasal influence; 5, functional insufficiency of the nasal resonator. He relates in detail five cases of vasomotor congestion of the larynx of nasal reflex origin, the laryngeal symptoms, hoarseness, cough, swelling of mucosa, occurring after the nasal phenomena, sneezing, secretion, pituitary turgescence, etc.; and he succeeded in all cases in provoking the laryngeal phenomena by stimulation of the trigeminal and olfactory nerve endings. The author has demonstrated the lowering of the pulmonary capacity by affections of the nose, *e.g.*, in a young singer a hypertrophic rhinitis diminished the capacity by seven hundred centimètres, and loss of high notes followed, difficulty of *mezzo di voce*, hoarseness, etc., all of which were cured on the removal of a nasal spur. These accidents occur through excessive work on the part of the larynx, leading to fatigue; eventually laryngeal lesions are manifested, congestion, increased susceptibility, cough, chronic laryngitis, with

thickenings, nodules, etc. The lowering of the resonating power of the nasopharynx always plays an important part in causing fatigue of the larynx, as Michel pointed out in 1876. Joal cites two cases of adenoids causing laryngeal symptoms and loss of voice, cured by their removal.

R. Norris Wolfenden.

Poulsso, E.—*A Case of Hydrorrhœa Nasalis.* "Med. Soc. Christiania Reports," 1895.

A MAN, aged thirty, otherwise healthy, commenced in his thirteenth year to suffer three and four times yearly from attacks of excessive nasal secretion, lasting three and four days. The attacks by degrees became more and more frequent, the secretion more abundant and watery, while the duration of each attack was shorter. The attacks now generally appear every second week, and last one or two days; they commence generally in the morning with a sensation of irritation in the nose and pressure over the forehead, and when the patient gets out of bed the secretion becomes so abundant that it is impossible for the patient to do anything but to sit quietly and let the fluid flow into a basin; when obliged to move about he must hold a pocket-handkerchief constantly to his nose. This flow continues until about two o'clock at night, when he generally falls asleep, the discharge then leaving off until the next morning, when he wakes up to suffer again like the previous day, until it suddenly stops during the afternoon. The quantity of fluid discharged during an attack is estimated to be about one litre. The examination of the fluid gave the following result: Watery, white opalescent fluid of slight alkalic reaction; specific gravity, 1.006—1.007; 0.02 per cent. of albumen, 0.93 per cent. of salts, principally chloride of soda and iron, and small quantities of a fatty substance; microscopically white corpuscles. The examination of the nasal cavities did not reveal any abnormality. The patient had tried various treatments without any result. The speaker had prescribed atropin in a one-tenth per cent. solution, and the patient had derived great benefit from this drug, ten drops of the solution often being able to check the attacks or to lessen their intensity; and although this medicine had been taken for a considerable period of time, no ill effects had been observed. Dr. Poulsso considered the affection to be of a purely nervous character, but would refrain from giving any opinion as to whether it must be considered an affection of the fifth nerve or of the sympathetic.

Dr. UCHERMANN had had the patient under his treatment, and found a slight hypertrophy of the anterior end of the right concha media and of the anterior part of the septum on both sides, and had treated these slight anomalies locally without any effect whatever.

Dr. O. BULL mentioned a case observed by him, in which abundant secretion from the nose had appeared in attacks together with an eruption of herpes cornea, and pointed out the possibility of the naso-cilio nerve being affected in this case.

Prof. DAAE considered Dr. Poulsso's case to be due to a lesion of the fifth nerve, especially of the spheno-palatine branch, as it was a fact that the serous secretion of the pituitaria membrane was under the influence of this nerve.

Holger Mygind.

Woods, R. H.—*Modification of the Indian Rhinoplastic Operation.* "Brit. Med. Journ.," April 18, 1896.

At a meeting of the Royal Academy of Medicine in Ireland the author described his modification of the operation, by means of which the whole of the new nose was lined with a skin surface. The forehead wound, instead of being sutured, was covered by a skin flap from the arm—a procedure which did away with the necessity for economy in the cutting of the forehead flap, and made the complete lining of the nose with skin a possibility.

Ernest Waggett.

LARYNX, &c.

Egidi.—*Laryngeal Stenoses and their Treatment.* “Rev. de Laryng.,” Feb. 22, 1896.

A PAPER read at the second meeting of the Italian Society of Laryngology. The author divides laryngeal stenoses into (1) chronic, (2) acute, (3) of external origin. After reviewing the various causes which give rise to stenosis, the author proceeds to review the treatment. For certain affections general treatment is indicated. In syphilis, especially with collateral œdema, it would be a grave error to submit the patient to surgical operation without previous general treatment; he injects fifteen centigrammes of calomel and gives corrosive sublimate sprays, delaying operation as long as possible. He has seen severe stenoses disappear. In chronic stenoses Schroetter’s tubes have lost their value since the practice of intubation, especially with Massei’s modified tubes. In cicatricial stenosis they are most valuable after previous dilatation. If this form of stenosis resists dilatation and intubation, it is better to proceed at once to thyrotomy and excision of the cicatricial tissue. In stenoses due to tumours (not malignant), when these are removed by instruments sudden death may occur from asphyxia, so that it is necessary to be in readiness for immediate tracheotomy should danger arise; it is better than intubation. He relates such a case from his experience. He cites Massei’s opinion that in children especially tracheotomy should precede attempts to remove laryngeal growths. He disapproves of the prolonged wearing of the canula for several months in the hope of spontaneous resolution, without an attempt being made by laryngotomy to clear the larynx. In tubercular stenoses Egidi cannot advise intubation, as recommended by Massei, Dillon-Brown, and others. He prefers tracheotomy, and his experience has been that the rest thus given to the larynx causes disappearance of infiltration, and even of tubercular vegetations, and it is especially beneficial in primary forms. If instrumental interference is necessary later on, this is more effective after tracheotomy. He refers to three cases of Massei’s in which laryngeal tuberculosis was completely cured by tracheotomy, and he is only a very guarded advocate of curetting, etc.

In stenoses from abductor paralysis tracheotomy must be preferred to intubation. In acute stenoses treatment is identical in all forms except croup. In those due to œdema, phlegmonous laryngitis, erysipelas, laryngeal abscess, perichondritis, etc., which perhaps last only a few days, and the danger is only a question of a few hours, intubation is the treatment to be preferred. In croup, while serum treatment softens the membranes and assists their expulsion, intubation prevents the asphyxia and is preferable to tracheotomy in most cases. *R. Norris Wolfenden.*

Lack, H. L.—*A Contribution to the Operative Treatment of Malignant Disease of the Larynx, with Special Reference to the Danger of Cancerous Wound Infection.* “Lancet,” June 13, 1896.

THE object of this paper is, first, to direct special attention to the possibility of the dissemination of cancer by means of direct transplantation, as distinguished from dissemination by means of the blood and lymph channels; secondly, to the danger of infecting a wound with cancerous material in operations for malignant disease generally; and, thirdly, to consider the importance of these facts in relation to local recurrence after operations for malignant disease of the larynx. Thirty-five cases are quoted in support of this thesis, of which four occurred in the practice of the author in the last four years. The conclusion is that it seems very advisable

that in all cases of malignant disease the growth should be removed in one piece, all incisions being made in healthy surrounding tissues, and, where this has not or cannot be done, that the wound should be cleansed afterwards by cauterization.

St Clair Thomson.

Marsh, F.—*Cicatricial Stenosis of Larynx.* "Brit. Med. Journ.," April 25, 1896.

At a meeting of the Midland Medical Society the author showed a female patient of five years who had been unable to dispense with a tracheotomy tube inserted some months previously. Under an anæsthetic cicatricial stenosis of the larynx was detected. The cicatrix was divided with Heryng's knife, an O'Dwyer tube inserted, and the tracheotomy tube removed. Nine days later the O'Dwyer tube was found still to be indispensable, and on account of an attack of typhoid was allowed to remain *in situ* for three months. On removal both respiration and phonation were easily performed.

Ernest Waggett.

Otto, C. (Copenhagen).—*Remarks on Erysipelas of the Larynx.* "Bibliothek for Læger," April 1, 1896.

A HEALTHY man, aged thirty-seven, had for three weeks had a slight cold in the head and a cough. Three days before he was admitted to the hospital he had become hoarse, with some difficulty in breathing, these symptoms by degrees increasing in intensity, and the last four hours there had been repeated attacks of dyspnoea. On admission to the hospital the temperature was 100°6', and there was cyanosis of the face, stridulous respiration, recession of the jugular and the lower parts of the chest-wall, and general collapse. The urine contained a large quantity of albumen. The pharynx presented a normal appearance, while laryngoscopy revealed the existence of a considerable œdema of the mucous membrane of the epiglottis and the ary-epiglottic folds. Tracheotomy was now performed under slight chloroform-narcosis and the respiration became free. Thirty-six hours later the temperature, which had not since risen above 101°9', rose to 103°5', and the patient began to collapse without any considerable dyspnoea; clonic spasms of the lower extremity began to appear, the collapse increased rapidly, and death occurred. At the *post-mortem* examination the ary-epiglottic folds were found considerably œdematously swollen, injected, and ecchymotic, the swelling extending to the pyriform sinus and the posterior wall of the pharynx, and upwards to the anterior face of the epiglottis and the base of the tongue, while the trachea was only injected. The peritracheal muscles were infiltrated with a greyish fluid, and small abscesses filled with yellow pus were scattered about. Similar abscesses were to be found in the submucosa of the sinus pyriformis. Besides the *post-mortem* examination revealed the existence of an endocarditis and of parenchymatous degeneration of the myocardium, the liver, and the kidneys. The pus from the small abscesses of the larynx contained numerous masses of staphylococci, and no streptococci were to be found. Although there was no history of infection from erysipelas, the author thinks himself justified in considering the case described above as one of erysipelas laryngis, laying stress upon the result of the laryngoscopy, the remittent course of the disease, and the result of the *post-mortem* examination.

Holger Mygind.

Peck, G. A.—*Gangrene of the Ear and Face complicating Pertussis.* "Arch. Pediat.," April, 1896.

THE patient, aged twelve months, developed severe pertussis in November, 1894, which became complicated with a thin, blood-tinged discharge from the left ear. On January 9th, 1895, signs of inflammation about the left ear became manifest,

cedematous swelling of the canal obstructing the exit of an offensive watery discharge. On January 11th the swelling anterior to the meatus was punctured. On the 13th sloughing was noticeable about the wound, while the membrana tympani was seen to be intact. From this date sloughing rapidly progressed, and at the time of death (on January 25th) a circular patch of gangrene, five inches in diameter, occupied the left parotid region.

Ernest Waggett.

Ward, E.—*Laryngectomy.* "Brit. Med. Journ.," May 16.

THE author described the operation of laryngectomy, by means of which the organ was removed from below upwards without preliminary tracheotomy, and the opening into the pharynx subsequently sutured. The tracheal orifice was stitched to the skin flaps, suitably pared, and no tube was necessary. No communication remained between the air and food passages. He had operated on a man of sixty-four with epithelioma, a man of forty-two with dyspnœa and dysphagia, and a child with laryngeal papillomata. The author claimed that the operation as thus performed would reduce the mortality, shorten convalescence, add to the comfort of the patient, and would justify attempts at radical cure in some cases which were at present considered inadmissible.

Ernest Waggett.

E A R.

Clark, Gaylord P.—*The Equilibrium Function of the Ear.* Trans. Medical Society of the State of New York, 1896.

MUCH evidence has been accumulated from experimental operations upon animals and pathological conditions in man that the ear is concerned in the maintenance of body equilibrium. Although operations and pathological conditions alike have injured the structure of the ear, sometimes extensively and even diffusely, yet the results observed indicate a specialization of function in the different parts of this complex organ. Lee, of Columbia, has recently carried on a series of experiments upon the ear of the dogfish, and his results are of special value in that they define the nature of this specialization. His method has enabled him to throw certain parts of the ear—for example, different semicircular canals—into or out of function without coincident injury to their structure. He has observed that rotation of the body of an uninjured fish is accompanied by certain movements of the eyes and fins, which are characteristic of the direction in which the fish is turned. The eye movements are those which tend to retain the visual impressions of the resting position. The fin movements are those which tend to resist the turning. He has exposed and stimulated by pressure the uninjured ampullæ of the different semicircular canals, and called out eye and fin movements similar to those accompanying rotation of the uninjured fish, and which are just as characteristic of the ampulla stimulated as in turning they are of the direction of the turning. He has divided the ampullar nerves just before their entrance into the ampullæ and thrown the semicircular canals out of function; then the above-mentioned effects of physiological and artificial stimulation could no longer be obtained. His experiments show that each semicircular canal functions not only in movements in its own plane, but also in planes at angles with it, but less so as the angle increases up to a right angle. He has found that the anterior and posterior vertical semicircular canals of one ear function together in lateral rotation in planes between them and towards that side; and that the same is true of the two anterior vertical semi-

circular canals, one in each ear, in forward rotation, or of the two posterior vertical semicircular canals in backward rotation. The evidence seems to be perfectly conclusive that the semicircular canals of both ears of the dogfish constitute a compound sense organ, which is stimulated by head and body movements of rotation, and which functions by its parts, or by combinations of its parts, in every plane in which turning may occur.

The semicircular canals of the human ear are similar in structure and arrangement to those of the dogfish. Careful study of cases of aural vertigo, in the light of such definite physiological knowledge of the relation of the ear to equilibrium phenomena in certain animals as we now have, is to be desired.

Much clinical evidence has been recorded that vertigo may be produced by stimulation of the inner ear, and that certain characteristic movements have been obtained by stimulation of certain parts of the inner ear. In many cases, however, the mere fact of vertigo has alone been noted without observation as to its nature. If the pathological picture in aural vertigo is to be compared with the physiological picture in experiment on animals, certain conditions which may modify the former should be taken into consideration. The effects of disease may be much less definitely localized than those of operation. The sensations of dizziness are to be distinguished from the reflex movements due to disturbance of the co-ordinating mechanism. Clinically the subjective sensations predominate. In experiment on animals the objective reflex movements can alone be studied. When sensations and reflex movements of vertigo are both present in clinical cases the sensation appears to be that of rotation towards the affected side; the reflex movements are in the opposite direction. Birds and fish, upon which so much operative work has been done, when suspended—as they so much of the time are—in a gaseous or liquid medium lack all surface-contact impressions, and then manifest greater disturbance of equilibrium from ear lesions than they do when such impressions are supplied.

Lesions of the human ear may be accompanied by less pronounced disturbance of equilibrium on account of the surface-contact impressions which under all ordinary circumstances constantly arise. The study of a large variety of forms among the lower animals shows that the otolithic structures as well as the semicircular canals are concerned in the equilibrium function. *Gaylord P. Clark.*

Compaired.—*Two Cases of Acute Infantile Labyrinthitis.* “*Rev. de Laryng.*,” May 16, 1896.

OWING to the sudden development of symptoms this condition is often mistaken for acute meningitis, typhoid fever, acute hydrocephalus, etc. It is seen much more frequently in children than adults. It is not rare after parotiditis. Large doses of quinine and salicylates given for a long time have caused many deafnesses in children and adults, mistaken for labyrinthitis. It is often the result of propagation of a cerebro-spinal meningitis. In typhoid, when deafness is present it occurs late, in labyrinthitis it occurs very early; vertigo is absent in typhoid but present in labyrinthitis. The diagnosis from meningitis is more difficult. There are no paralytic symptoms in labyrinthitis, and the latter is readily curable, whereas the former is rapidly fatal. Labyrinthitis supervening at the period of development of speech, if the deafness is not discovered in time, leads to deaf-mutism.

R. Norris Wolfenden.

Marsh, F.—*Cholesteatoma of Mastoid.* “*Brit. Med. Journ.*,” Apr. 25, 1896.

AT a meeting of the Midland Medical Society the author showed a man of twenty who had suffered with mastoid abscesses, accompanied with but slight pain. On exploring a discharging sinus situated above the external auditory meatus, a cavity

fully two inches in diameter was found, containing fetid putty-like *débris*. The walls were of bone, except posteriorly, where the cerebellum could be felt pulsating. No meningeal or cerebral complications had occurred.

Ernest Waggett.

Moure, E. J., and Bordier.—*An Electro-Telephonic Acoumeter.* "Revue Inter. d'Electro.," Feb. and Mar., 1896, p. 253.

THIS apparatus is composed of (1) a Leclanché pile, (2) a milliampèremeter and rheostat, (3) an interrupter for breaking or making the current from the pile, (4) a telephone receiver. The following is the principle of this new acoumeter: the sound which is to be employed in testing the hearing maintains a constant height and timbre; the intensity alone varies, and this is measured by the electrical intensity expressed in the milliampères.

When the acoumeter is used the patient is placed at a distance of two mètres from the apparatus; the rheostat being at the maximum resistance, the telephonic clicking is not perceived even by the normal ear. As the handle of the rheostat is turned, however, the sound, increasing in intensity, comes to be heard; the indication of the milliampèremeter is then noted. If, in spite of the removal of the entire resistance the patient does not hear the clicking, he is brought nearer the receiver until the sound is perceived; besides the number of milliampères, the distance of the patient from the apparatus is then noted.

Examinations carried out in this way will allow of comparisons being made between all cases, and at different dates in the same case.

A. B. Kelly.

Poulsen, Kr. (Copenhagen).—*A Case of Purulent Sinus Thrombosis after Chronic Otitis Media.* "Hospitals-Tidende," 1895, No. 38.

A BOY, aged fifteen, had from his earliest childhood suffered from left otorrhœa. In January, 1895, pains in the left ear appeared, and on the 15th of February resection of the left mastoid process was performed; the temperature did not, however, fall, and rigors occurred. Two days later swelling and tenderness were noted along the left internal jugular vein. The pulse was 120, the sensory system was not involved, and the fundus of the eye was normal. On the 19th of February the temperature was normal in the morning, and 40.5° C. (104.8° F.) at noon, and the general condition became worse. The left transverse sinus was then laid open and found to be surrounded by pus; the vein was opened, a large puriform thrombus removed, and the wound was dressed without ligature of the internal jugular vein. Until the 9th of March the patient had constant high fever, alternating with normal temperature, and several minor metastases appeared; these were caused by retention of pus in the wound by the firm pressure of the iodoform gauze, necessitated on account of recurring hæmorrhage from the sinus as soon as the plug was removed or was left loose in the wound. The patient, however, ultimately recovered, the external wound healed, but the discharge from the ear still continued.

Holger Mygind.

Poulsen, Kr. (Copenhagen).—*Otitic Temporal Abscess; Resection of the Cranium; Recovery.* "Hospitals-Tidende," 1896, No. 10.

DR. POULSEN reports the following case:—The patient, a man, aged fifty-two, had for many years had a discharge from the right ear. In August, 1895, intense pains in the right side of the head, and tenderness behind the external ear. A fortnight previous to the operation a slight paresis of the right facial nerve appeared—which paresis, by the first examination of the patient, proved to be of peripheral origin—the pains became severer, accompanied by giddiness, and in the morning of the day of the operation the patient vomited. No rigors or other fever symptoms.

On the 13th of September, 1895, Dr. Poulsen made an incision over the mastoid process. After the opening of a small sub-periosteal abscess, admittance to the antrum was tried by means of a chisel. There was, however, no antrum to be found in the normal place, the bone being sclerotic, but the superior cells of the process were found to contain pus. At last two tablespoonfuls of pus without any odour were seen to stream from the middle cranial cavity, proceeding from a cavity between the tegmen tympani and the dura mater. A piece of bone the size of a shilling was now removed from the cranium, and iodoform gauze was introduced. The first days after the operation the general condition of the patient improved and the pains disappeared, the temperature being subnormal. Later on, however, the state of the patient presented the following principal features :—Temperature always subnormal ; pulse, 76 and 48 ; pains in the head ; now and then a single vomit, but frequently a feeling of sickness ; drowsiness often present, but now and then it disappeared entirely. On the 5th of October swelling of the right optic was diagnosed, and a fortnight later also on the left side, with hæmorrhage in the retina. On the 20th of October the wound is reopened ; the dura mater opened through an incision, and the brain seen tense and without pulsation. Piercing the brain substance with a stiletto gave no result, but a knife introduced in different directions at last released five tablespoonfuls of odourless pus when the knife was introduced two centimètres upwards and backwards in the temporal lobe, and pulsation of the brain reappeared. A drainage tube was introduced into the cerebral cavity. The following days the general conditions were very much improved ; but three days later the temperature began to rise, drowsiness and vomiting reappeared, and the flow of pus through the tube ceased. The tube was removed and found blocked by cerebral tissue, and it was reintroduced, with the aid of an anæsthetic, and two teaspoonfuls of pus escaped. The same process was repeated three days later on account of the occlusion of the tube with a coagulum, but this time a considerable venous bleeding necessitated the introduction of iodoform gauze into the abscess cavity. After this the healing of the wound, however, proceeds normally. On the 7th of November the left papilla is normal and the right one improving very much, and on the 1st of December the patient leaves his bed. On the 11th of January, 1896, the right papilla is normal, and the patient leaves the hospital with a trivial discharge from the ear, the paresis of the left facial nerve having disappeared entirely. On the 4th of February the patient is reported to be perfectly well.

Holger Mygind.

Rueda.—*Necrosis of the Labyrinth.* “*Rev. de Laryng.*,” March 15, 1896.

A CHILD, three and a half years of age, after measles had suppurative median otitis of the right side. Four months afterwards there was right facial paralysis and abundant sanguinolent suppuration from the meatus, a narrowed ulcerated meatus, red and bleeding fungous growths, which were removed, and an osseous mass at the bottom, which was removed by forceps. The child was for a month without treatment, returning then with great pain and hæmorrhage, due to the same condition. A sequestrum so large that it had to be broken was this time removed. This was the inferior part of the vestibule, the posterior half of the external semicircular canal, the inferior orifice of the posterior semicircular canal, and the commencement of the first turn of the cochlea, the promontory, fenestra rotunda, and inferior edge of the fenestra ovalis being clearly distinguished. After removal of this sequestrum cure was rapid, and cicatricial tissue was formed at the bottom of the meatus. The course of these symptoms occupied a year, without being accompanied with the least sign of meningitic or cerebral symptoms. Only sixty-eight cases of necrosis of the labyrinth have been recorded.

Some weeks after the appearance of facial paralysis, and before discovering any sequestrum, the child was observed to fall towards the right side when walking. This lasted fifteen days, unaccompanied with any meningo-encephalic symptom. The author believes this to be a clinical demonstration of the function of the semicircular canals, and makes the opinion of Baginsky doubtful (basing it upon the negative clinical signs in a case of complete destruction of the labyrinth) that affections of equilibrium are due to a meningo-encephalic lesion. The author believes that sight, touch, or the muscular sense in his case have disappeared entirely, either spontaneously or by the action of the semicircular canal of the opposite side. The functional substitution of a semicircular canal would be analogous to what occurs in certain localized lesions of the nervous centres. As in Goldstein's case (*JOURNAL OF LARYNGOLOGY*, 1895), a certain degree of audition was preserved in this child. He repeated words and numbers spoken at a distance of four mètres on the affected side.

R. Norris Wolfenden.

REVIEWS.

Pritchard.—*Diseases of the Ear.* Third Edition. Lewis' Practical Series. 275 pages, price 6s.

IT is rarely that one feels so thoroughly pleased and satisfied with a book as one does with the one in question. This book professes to be practical, and it is thoroughly so; the illustrations are not too numerous, but they are useful in most instances, though there are one or two which would be better in the instrument catalogue. Of the others, most noteworthy is the particularly clever diagrammatic sketch of the auditory apparatus as given on page 6. The first seven-and-twenty pages are devoted to the anatomy of the organ, which is dealt with in an extremely able way—short but clear, a style which characterises the book throughout, and adds much to its value. The author devotes about thirty pages to methods of examination, and whilst speaking of the sounds heard by the diagnostic tube, says (page 42) that besides the sound of inflation, of perforation, or of fluid in the tympanum, though there are others they are of not much moment. The author describes the method of Valsalva, and we gather that he still employs it, although its use is a moot point with aurists. In measurement of the hearing power the directions are very clear and most practical. In speaking of the precautions to be taken by artillery-men and others, we are told to direct that the tympanic cavities be well inflated; this is, however, hardly necessary, as keeping the mouth open is quite sufficient. Like most English aurists, Dr. Pritchard does not countenance removal of the stapes; nor, when speaking of the removal of adenoid vegetations, does he advise any nasal injection for at least two days after the operation (page 137). Further on (page 142) Dr. Pritchard throws the great weight of his valuable experience into the balance against so-called turbinotomy.

There are also numerous useful hints, not only in the recognition of disease, but also in avoiding errors in diagnosis, such as the origin and appearance of false membrana tympani (page 69), etc.

We have nothing in particular to say about the chapter on naso-pharyngeal and nasal conditions found in and leading to ear disease, except that they are fully equal to the rest of the book.

And, finally, Dr. Pritchard gives a series of useful formulæ and preparations for the treatment of both ear and naso-pharyngeal affections, which will continue to prove a boon to many.

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THE
JOURNAL OF LARYNGOLOGY,
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THE RELATION OF ACUTE DISEASES OF THE NOSE AND THROAT TO DISORDERS OF DIGESTION.¹

By MOREAU R. BROWN, M.D. (Chicago).

CLINICAL experience demonstrates that there are certain well-defined relations existing between acute inflammatory conditions of the nose and throat, and other disordered organs of the body. In some cases these relations are easily explained, while in others they are shrouded in mysteries, which pathology has as yet failed to unfold, and which all attempts to account for can be at present but matters of theory, not based on the result of completed scientific investigation. Not that the pathologist or laryngologist has been derelict in searching for the etiological relations, but rather that the limits of science have precluded their discovery. The connection between acute inflammation of the upper air passages and disorders of digestion, although a matter of clinical observation, is no exception to this statement, and the surprising fact is that there is such a scant amount of literature bearing on the subject.

Bosworth in his work on "Diseases of the Nose and Throat" briefly refers to the changes occurring in the pharyngeal mucous membrane in stomachic disorders, and, further, calls attention to chronic inflammation of the upper air passages as being an important etiological factor in acute inflammation of the same region. He considers the involvement of the pharynx in gastric disorders as due to the fact that the pharynx is a part of the digestive tract, being the point where the air passages cross it, which may in some cases account for the extension of the inflammatory process.

In his Lettsonian Lectures, T. Lander Brunton refers to stomach cough

¹ Read at the Eighteenth Annual Meeting of the American Laryngological Association, held in Pittsburgh, May 16th, 1896, opening the discussion on the Relation of Diseases of the Nose and Throat to Disorders of Digestion.

as being due to mild inflammatory changes in the upper air passages, plus the digestive disturbances. He cites a case of stomach cough wherein the pharynx was decidedly hyperæmic, and, although no laryngeal examination was made, it was concluded from the symptoms that the larynx was similarly involved. The cough and inflammation failed to respond to treatment until a blue pill had been administered. The following somewhat similar case in my own practice serves to illustrate the condition rather more forcibly :—

Mr. —, age about forty-five, restaurant keeper by occupation, a healthy, robust-looking man, fond of rich food, consulted me first about five years ago for a rather severe attack of acute inflammation in the upper air passages (nose, pharynx, and larynx), accompanied with asthma. As a history, he stated that such attacks were generally preceded by gastro-intestinal disorders, and a few days prior to the present attack he had suffered considerable digestive disturbance, such as loss of appetite, disgust of food, nausea, headache, abdominal distress and pain, eructation of gas, constipation, and mental depression. The treatment directed to the inflammation of the upper air passages was carefully carried out for a short time, but failed to give relief until a saline laxative, followed by such treatment as was calculated to restore the digestion, was ordered and taken. Afterwards appropriate treatment, carried on for some time, checked further asthmatic attacks ; but I have seen him a few times since with acute inflammation of the upper air passages, which responds readily to remedies directed to the digestive organs.

I have searched the medical literature within my reach for other authorities bearing on this subject, and I am able to give the following reports :—

(Edema of the larynx in the angio-neurotic, connected with gastric disturbances generally, is mentioned in Collins, Osler, Lovett, and also by Pryor ("Med. Record," July 28th, 1894).

Nogano ("Courrier Méd.," Paris, Sept. 23rd, 1893) records a case of hæmorrhage of the larynx in a forty-five-year-old man who had suffered from cirrhosis of the liver and cardiac disease.

Cackle ("London Med. Times," Aug. 4th, 1884) records a case with symptoms resembling those of laryngeal phthisis. Later two attacks of unconsciousness followed in quick succession, the latter being fatal. At the autopsy, latent hepatic abscess was found ; also a small ulcer of the left vocal cord, the nature of which was not stated. No signs of tuberculosis were discovered.

Ed. Löri ("Die durch anderweitige Erkrankungen bedingten Veraenderungen des Rachens, des Kehlkopfs, und der Luftroehre," Stuttgart, 1885) considers "gastro-intestinal catarrh may be either the cause or the result of chronic throat and laryngeal catarrhs." He mentions, also, hæmorrhagic affections of the larynx in liver cirrhosis and ecchinococcus.

Ed. Löri ("Jahrbuch für Kinderheilkunde," XXI., 1884 ; "Centralblatt für Laryngologie," I., 360 ; "Orvosi Hetilap," 1884, No. 12 ; "Pest Med. Presse," No. 31), speaking of gastric complications of laryngeal disease in children, says :—"Laryngeal disease may affect the "stomach by continuity, by swallowing secretions of ulcerated sores,

"cankers, etc., and gastric disturbances are often produced in a reflex way from the larynx. Especially do we frequently observe metiorism and anorexia, with inflammatory disease of the posterior laryngeal walls, and also gastric dilatation and vomiting."

Turck has also recently demonstrated the origin of stomachic disorders from naso-pharyngeal infection, finding similar micro-organisms in both regions, and the former relieved after relieving the latter. Further bacteriological research may be able to demonstrate the reverse of this position, and establish that stomach disorders are casual factors of laryngeal inflammations, though, as far as I can learn, no one has undertaken the task.

Steffin ("Ziemssen's Cyclopædia") states that spasm of the glottis may be favoured by elevation of the diaphragm owing to over-filling of the stomach, or by over-distension of the intestines by fecal masses, or by serous swelling of the liver. Amongst the conditions found present in spasm of the glottis are swelling, and yellow or yellow-grey colour of the liver, and a considerable deposit of fat within its cells.

Ariza (Madrid), in an article entitled "Laryngismo Gastrico" ("Centralblatt," II., 446; "El Distancen," No. 44, p. 211, 20th of May, 1885), cites a case (Virchow's "Annalen") of aphonia from indigestion relieved by an emetic. He distinguishes three varieties of laryngeal disturbance from gastric disorders:—(1) Laryngeal hyperæsthesia, with normal aspect of fauces and larynx, the patients complaining of burning sensations, pain, etc. All these patients suffer from dyspepsia. He reported cases at the Laryngological Congress at Milan. (2) "Laryngismo gastrico plastico." The vocal cords and surroundings are hyperæmic and painful, and vary with the gastric disorder. This form especially occurs with chronic gastric disease. (3) "Laryngismo gastrico paralytico." He says that he cannot explain the aphonia and dysphonia in cholera cases, except by a temporary reflex paralysis of the larynx. He finds, however, in the literature, no laryngoscopic observations, and thinks they would be difficult to make. Kispert, who abstracts his paper, says that Matterstock made some good observations of this kind in the Würzburg epidemic, and found this paralysis frequent, especially on the left side.

So much for authorities. The explanation of the conditions of these similar occurrences is not easy, but the following may be suggested:—In œdema of the larynx, occurring during the course of liver disorders, it is apparent that we must look to the obstruction of the aortal circulation as a cause, and in the inflammation produced by the imbibition of alcohol rather to the venous stasis which follows its use. This is particularly the case in the œdema of the upper air passages ensuing upon a debauch, as is shown by the rapidity with which it disappears on taking further liquor early the next day, and the subsequent increase of the œdematous condition, or by the more rapid recovery following an evacuation of the gastro-intestinal tract.

In acute catarrhal inflammation of the nose and throat, supervening on disorders of digestion, we have an entirely different element to deal with. In offering an explanation for this condition we must largely theorize. It has been, in times past, the custom to call to our aid the old

theory of reflexes, and it may not be unreasonable to suppose that these views are not entirely without foundation. It is a recognized fact, as so aptly put by M. Gross ("New York Med. Journ.," May 4th, 1895), that "every affection of the stomach is reflected back on the other organs, and, inversely, every disorder of the organs reacts upon the stomach." Yet in the present day of bacteriological research, when the micro-organism theory of inflammation is generally recognized, we must agree with Bosworth, who, in a paper read before this Association last year, states: "I think that, as we become more familiar with the disorders of the upper air tract, we will in many cases be able to abandon this somewhat indefinite and obscure term 'reflex,' and adopt the theory that many of the so-called 'reflexes' are the direct result of morbid action upon either the nerve centres or the tissues involved in the inflammatory process" (p. 655, "New York Med. Journ.," Nov., 1895).

What bacteriological research has failed to fully establish is demonstrated clinically, namely, that an acute inflammation of the upper air passages will create disorders of digestion by direct infection through the mass of muco-purulent secretion, loaded with bacteria, which finds its way into the stomach. But as to the reverse process, is it probable that the upper air passages become inoculated directly by the stomach contents? The irritation of the larynx and pharynx, or, less often, the nasopharynx, from the eructation of the contents of the stomach, is to be ascribed more to the direct irritant effect of the secretion than to inoculation. Yet the irritating effect may be so intense and prolonged that acute inflammation follows. In this case it may be that the secretion furnishes a proper soil for the bacteria which light up the inflammation.

J. E. Free ("New York Med. Journ.," Dec. 7th, 1895) states:—"If there is a morbid process at work in the stomach, there will be established in it colonies of bacteria in abundance; the toxins may be absorbed, and nourishment to the tissues thus contaminated, and every tissue of the body compelled to feed on this contaminated blood."

Warren, in his "Surgical Pathology" (p. 122), says:—"Van Buren explains catching cold 'by arrest of function of the skin as an emunctory, whereby certain effects and presumably noxious materials which should be eliminated are retained and act as blood poisons.' This view of auto-infection is used to explain many febrile and inflammatory disturbances due to ptomaine absorptions arising from gastric and intestinal disorders."

We know that the presence in the circulatory blood of certain toxic products of some micro-organisms favours the development of foci of inflammation, and the site of a chronic inflammation seems sufficient to predispose to infection. Orloff ("Materialien zur Frage über die Eintrittswege der Mikroben in den Thierischen Organismus"—"Centralblatt für Bacteriologie und Parasitenkunde," Band 111, No. 15) fed with pure culture of staphylococcus six healthy animals. He then made a subcutaneous fracture in all six animals, and found that suppuration ensued at the point of fracture. This demonstrates that bacteria and toxins in the stomach will infect any weak point in the system. We may, therefore, surmise that in this manner the nose and throat may be infected through

disorders of digestion. Another explanation of this condition might be that digestive disorders would lower the vitality to such a degree that the patient would become more liable than the healthy to attacks of acute inflammation, and this would be more apt to occur at points weakened by chronic inflammatory changes, such as we find in the upper air passages of the majority of individuals.

There is one disease of the gastro-intestinal tract in which laryngeal complications have been extensively studied; and whilst typhoid fever may not be considered as falling within the scope of my subject, yet the inference is legitimate that, if typhoid fever does produce laryngeal complications, so also may gastritis have an analogous influence on the larynx and other upper air organs.

Laryngeal complications occurring in typhoid fever have attracted no little attention, and literature abounds with reports of cases and theories advanced as to the relation they have to each other. The laryngeal changes vary from a slight degree of hyperæmia to rather extensive loss of tissue. In some cases there is what appears to be a simple catarrhal laryngitis, or there may be œdema, infiltration of tissue, ulceration, or perichondritis. The larynx is, at times, left in a state of extensive deformity. The changes may occur at almost any stage of the typhoid period, occasionally ushering in the disease. Voltini (*"Archives of Laryngology,"* Vol. I.) describes a case where a patient, after exposure to wet and cold, developed a severe laryngitis. In the course of a few days regular typhoid fever set in, and, running its usual course, the laryngeal condition progressed rapidly to the stage of ulceration.

The laryngeal complications seem to bear no relation to the typhoid symptoms. The deeper tissues are seldom involved in the early stages of the disease; ulceration, œdema, and perichondritis occur in the later stages, or during convalescence, sometimes as late as two months after the onset of the disease (*"Union Med.,"* March 10th, 1892). As may be surmised, the symptoms may be serious from stenosis, or from the dangers of necrosis. The condition in some cases may result in loss of life; tracheotomy or intubation may be required; and the resulting deformities may necessitate the indefinite retention of the tube. The lesions generally involve the epiglottis, arytenoids, and cricoid cartilages.

Lucatela (*"Gazetta degli Ospedali,"* 70, 132) and others report finding Ebert's bacilli in the larynx in fatal cases. Brieger and Fränkel failed to demonstrate the presence of typhoid bacilli in these laryngeal ulcers (Kanthack and Drysdale, *"JOURN. OF LARYNGOLOGY,"* April, 1896), but the weight of evidence seems to favour the specific origin of laryngeal ulcers in typhoid. Taken alone, the argument from analogy is not convincing; but it seems to be plausible enough to infer that if the typhoid bacilli can infect the larynx, so may other forms of bacilli which have their origin in the stomach be able to invade and infect, likewise, the upper air passages.

To resume, then, the subject, I would say that no proof has yet been presented of direct causation of acute inflammatory processes in the upper air passages by stomach disorders; but that clinical observation is abundant in favour of such causation, and that the hope may be entertained that the bacteriologists may soon be able to supply direct proof.

ANÆSTHETICS AS EMPLOYED FOR OPERATIONS ON THE THROAT AND NOSE.

By W. G. HOLLOWAY, M.D., B.A., Cantab.,

Assistant Surgeon to the Central London Throat, Nose, and Ear Hospital.

(*"Medical Magazine,"* June, 1896.) (*Abstract.*)

OPERATIONS requiring anæsthesia were divided into three classes : (1) Those which only require a period of anæsthesia not exceeding 45 to 50 seconds ; (2) Those which require anæsthesia up to one, one and a half, or two minutes at most ; (3) major operations, for which deep and prolonged anæsthesia has to be maintained. The anæsthetic invariably employed for operations in the first of these divisions is nitrous oxide gas, which is supplemented by the administration of a small quantity of ether vapour for those in the second class.

For the major operations, with but very few exceptions, chloroform is always given in preference to ether, which produces venous congestion in the cervical vessels, irritation in cases of asthma and chronic bronchitis, hyperæmia of the kidneys, nausea, and not uncommonly pneumonia. Struggling, excitement, and even maniacal symptoms sometimes occur during its administration, especially where the patient is addicted to alcohol.

The administration of nitrous oxide gas has been adopted as the anæsthetic for operations of short duration, not only on account of preventing pain and suffering on the part of the patient, but also for the equally important purpose of obviating the shock and terror experienced especially by children, in course of the operation. The routine method of administering gas, either alone or supplemented by a small quantity of ether vapour, is described in detail, and the author deprecates the practice of allowing the gas to rush into the reservoir or bag, because it is then inspired under pressure, and more is driven into the lungs than can be properly absorbed by the blood in any given time. The signs and effects of nitrous oxide narcosis are described in detail, and special stress is laid on the fact that the cough reflex remains ; a circumstance which in the author's opinion is of the greatest importance in operations on the pharynx and tonsils. For the presence of this reflex, by inducing cough, prevents the entrance of blood into the larynx, trachea, and bronchi.

The objections which have been frequently made to the use of nitrous oxide gas for tonsillotomy, removal of adenoids, etc., from the point of view that its effects are so transient and the period of anæsthesia is so short that the operator cannot finish the operation satisfactorily before the patient recovers consciousness, are discussed ; and (to confute this opinion) very strong evidence in favour of its efficiency is produced by the author, who appends a table of over 4500 cases (extending over a period of four years), in all of which either gas alone or gas supplemented

with a small quantity of ether vapour, was given satisfactorily and without untoward results.

Should the operator prefer to perform tonsillotomy as a preliminary to removal of adenoid growths from the naso-pharynx—thus dividing the operation into two parts—gas may be administered a second time without danger, and provided that proper care is exercised no bad after-effects are to be apprehended. Should hæmorrhage to any alarming extent occur during the operation—an exceedingly rare consequence—it is far less serious under the short narcosis of gas than it would be under the more deep and prolonged anæsthesia of either chloroform or ether. In the experience of the author, nitrous oxide gas has little or no influence on the amount of hæmorrhage consequent on these operations, but it certainly has no tendency to increase it.

The next point to which attention is directed is the *position of the patient during operations* for which either gas alone, or combined with a small quantity of ether, is employed. At the Central London Throat, Nose, and Ear Hospital the patient is seated in a chair provided with a high back, fixed to the floor and facing the operator. In the case of small children, the child is held by a nurse seated in the chair, while a second nurse standing behind holds the head and pushes up the tonsils, or this duty may be performed by the anæsthetist. Previous to the administration of the gas, a mouth prop is inserted to keep the patient's mouth open ready for the operator. The gag used at the hospital in question is the instrument introduced by Wyatt Wingrave. A caution against forcibly opening the mouth by a side-gag is added by the author, who records two cases in which dislocation of the lower jaw was produced by a too energetic application of that instrument.

The advantages assigned to the sitting or upright position of the patient during these operations are :—

1. That the surgeon is placed in the best situation for reflecting light from his frontal mirror into the mouth, and is enabled to observe and control every step in the operation without change of position, either on the part of the patient or himself.

2. This position is a perfectly safe one for the patient, provided that gas, or gas supplemented by ether in small quantity, is employed as the anæsthetic.

3. If severe hæmorrhage should occur, the surgeon is in the best position to determine its source, and apply the proper measures for its arrest.

4. The operator has complete control over the patient ; for by bending the head forward the blood easily runs out of the mouth, instead of collecting at the back of the pharynx, in which case it must inevitably find its way into the larynx and bronchi.

5. The celerity of operation, comfort to the patient, convenience to the anæsthetist, and cleanliness, as regards soiling the patient's and assistant's clothing, are other advantages confirmed by practical experience.

The recumbent position is considered to be dangerous, from the increased difficulty in operating safely and satisfactorily on the part of

the surgeon, combined with the risk to the patient of blood gaining entrance to the larynx and trachea.

Anæsthesia by Chloroform for operations on the throat and nose is briefly considered, with special reference to tonsillotomy and removal of adenoid growths from the naso-pharynx. It is generally admitted that in these operations deep chloroform narcosis should not be induced, and special caution is advised with regard to the abolition of the cough reflex. It is, however, very easy to lay down rules for the production of a certain degree of anæsthesia in theory, but extremely difficult to carry them out in practice, for it is doubtful if any anæsthetist, however experienced and skilful, can administer chloroform with such absolute accuracy as to retain the cough reflex to the exclusion of others.

It is therefore contended that chloroform is a dangerous anæsthetic for operations on the throat and nose ; and in support of this statement the author appends a table recording fifteen deaths from chloroform reported in the medical press since 1892 (purposely omitting many others not officially notified in the medical journals, which, if added, would increase the mortality from this anæsthetic to a somewhat alarming total).

Attention was especially called to a column in the above-mentioned table in which *the quantity of chloroform* administered in these fatal cases was recorded. This was compared with another table, giving statistics of the last twelve cases in which chloroform had been administered by the author. The enormous difference in the amount used is very remarkable. For instance, a case of aural polypus which ended fatally required four drachms of chloroform for a comparatively short operation ; while in the author's table a goitre was removed—a procedure occupying seventy-four minutes—with the expenditure of a less amount of the anæsthetic.

The author concludes by a description of "KROHNE'S IMPROVED REGULATING INHALER," which is invariably used by him, and has proved most satisfactory in practice on account of the small quantity of chloroform required to produce anæsthesia, the facility with which the narcosis can be maintained, and the safety against the administration of an overdose which this apparatus confers.

The enormous saving in the amount of chloroform used in this form of inhaler is very striking. For, as death under this anæsthetic is generally admitted to be due to an overdose, it must be evident that the quantity administered should be the least possible which is capable of inducing and maintaining the required degree of narcosis. Nevertheless, death may result from a small dose of chloroform if given in too concentrated a form ; so that the fact of only a very small quantity having been given in a particular case by no means proves that the fatal result was not due to an overdose. Moreover, the unpleasant after-effects produced are regulated by the quantity of the anæsthetic inhaled, so that vomiting, nausea, headache, etc., are of rare occurrence in cases where only small quantities of chloroform have been given.

The so-called "open method" of giving chloroform, on a towel, must be absolutely deprecated, on account of the impossibility of estimating

the strength of the vapour inhaled at any given moment, and the great liability with such a method to administer a fatal dose.

The *average amount* of chloroform used for every *five minutes* during which anæsthesia was maintained in these twelve cases was 18·5 minims, a result which is curiously approximate to that obtained by Vincent, of Lyons, and Carter, from statistics of a much larger number of administrations; indeed, there is only a difference of ·5 minims. This, in the author's opinion, is convincing testimony of the accuracy of the regulating inhaler.

SOCIETIES' MEETINGS.

NEW YORK ACADEMY OF MEDICINE.

Wednesday, April 22nd, 1896.

Section on Laryngology and Rhinology.

Chairman—JAMES E. NEWCOMB, M.D.

Presentation of Cases.

Dr. THOMAS J. HARRIS presented three cases. He said two of the cases were rare, and one, though common, was interesting from the treatment and the method employed. The first, a young woman, had noticed for the past two months a growth in the left side of the nose, a little hæmorrhage, and had suffered from headache, nausea, and vomiting. The growth was pedunculated, attached to the septum, semi-solid, and not sensitive to touch. The second case was a man who had a tumour located on or near the vocal cords. The third case was one of tubercular laryngitis and pulmonary tuberculosis. The case had been under the care of a number of physicians, had consolidation at both apices, a temperature when first under observation of $101\frac{1}{2}^{\circ}$, and was unable to speak above a whisper. For three months he had been put on creosote internally, and intratracheal medication, with wonderful results. He was now able to work right along, temperature was normal, and the process in the lungs was checked. The ulcers in the trachea were entirely healed, appetite was good, he slept well, and was in a condition in which he could possibly be cured if he could be sent to the country.

In discussing the case with the tumour in the nostril, Dr. WRIGHT said he thought there was no doubt that the tumour was an angioma, which was the most common of any of the benign tumours of the septum.

The German writers recognized bleeding tumours of the nose, reporting twenty or more cases. Only nine or ten cases of true papillomata were recorded; nearly all were attached to the septum or to the floor of the nose.

Dr. MYLES wished to ask Dr. Harris if the man with the tumour in the larynx could phonate better now than he could before, for he thought the tumour was now too large to drop down between the cords.

Dr. HARRIS said the tumour did drop back between the cords, but the man phoned better when it was above.

Ulceration of Larynx.

Dr. WENDELL C. PHILLIPS presented a man, aged twenty-six, veterinary doctor, who, thirteen years ago, had an ulceration affecting the skin and free border of the cartilaginous septum. The scar tissue gave every indication that the disease had been lupus. An operation was performed, with recovery, as far as the man knew. Three years ago he began to have hoarseness, with gradual loss of voice from that time on. There was now scar tissue in the middle line of the nose. The voice had been lost for over a year. There was a pultaceous mass in the region of the turbinated bone and located on the left side. It bled easily, was covered with secretion, and there was also partial stenosis from the right side, perhaps due to deformity of the septum. In the larynx there was a large ulceration on the right side above the vocal cords, with a great deal of infiltration upon both sides. There was no history of syphilis, but he could not free his mind of the suspicion, and put the patient on potassium iodide. The patient was now taking 120 gr. per day, and also had had frequent applications of twenty-five per cent. ichthyol to the larynx. There had been much improvement. He was somewhat puzzled as to whether lupus and syphilis co-existed in this case.

Dr. WRIGHT thought there was no doubt it was specific, but it was strange that it had not attacked the bone.

Dr. MAYER said there was a great deal of thickening in the region of the arachnoid, so that it was difficult to get a good view. He thought it was specific in origin, and the induration would likely be resorbed if mercurial inunctions were added to the potassium iodide treatment.

Dr. MYLES thought there were important points wanting in any diagnosis. He thought the extensive infiltration in the larynx was partly due to the patient attempting to use his voice.

The Chairman, Dr. NEWCOMB, said the case was one of interest, and he recalled a case which came to the Demilt for treatment, and had been diagnosed and treated in several institutions as a case of lupus. It was put on specific treatment and improved at once. The physician became used to the rapid progress of syphilitic lesions, and sometimes might be misled by those cases in which the disease runs a slow course.

Dr. PHILLIPS said, though he thought the case was doubtless syphilitic, yet many of the symptoms were not those of tertiary syphilitic development.

New Remedies in the Treatment of Diseases of the Upper Air Passages.

Dr. CARL E. MUNGER read a paper on this subject. He said that during the past year a number of so-called new remedies had been used in the Manhattan Eye and Ear Hospital in the treatment of nasal and laryngeal diseases, and this report was based on the record of clinical cases at Dr. Chappell's clinic during the past year. Some of the drugs

were but old ones dressed in new clothes ; some had proven useful, and some had not.

Argentamin.—This was of much value in the treatment of catarrhal and purulent rhinitis, a five to ten per cent. solution being applied to the well-cleansed mucous membrane by the physician not oftener than every second day. A half to two per cent. solution might be given the patient for daily use at home. The older silver salts seemed better in chronic laryngitis.

Acetanilid was used for insufflation on nasal wounds after operations. The pure powder proved a better dressing than when mixed with zinc stearate. The healing seemed more rapid, frontal headache and neuralgic pains following operations seemed less frequent ; and no cyanosis, profuse sweating, cardiac depression, or unfavourable systemic effects were observed. Persistent hæmorrhages were apt to follow the use of the drug upon septal wounds.

Tannigen was used in cases of hypertrophic rhinitis and chronic nasal pharyngitis. The physician can use an alcoholic solution of a drachm to the ounce, while for the patient's use it was given from ten gr. to one dr. to the ounce in a vehicle known at the hospital as "oleum hydrocarbon compound." This was proposed by Dr. W. F. Chappell, and is a mixture of unguentum zinci oxidi and benzoïnol, a few drops of oleum gaultheriæ and oleum sassafras. The pure drug proved to be too strong ; sometimes the solution was made weaker than the above, but it did not prove as satisfactory in its results as was hoped, and seemed to act as a stimulant rather than an astringent.

Formalin in half to two per cent. solution was an effective deodorizer and disinfectant, and especially useful in syphilitic ulcerations. Dr. Munger narrated the history of two cases to show its usefulness for this purpose.

Creosote carbonate gave good results in acute follicular tonsillitis, even without other local or constitutional treatment. It relieved the patient quite rapidly, and often cured the case in two or three days.

Pyrozone was used in a three and a twenty-five per cent. solution. The three per cent. solution was valuable as an antiseptic and hæmostatic after operations, as a deodorizer, and to soften crusts and scabs previous to removal. The twenty-five per cent. solution, called "caustic pyrozone," was used in follicular pharyngitis and tonsillitis with fair results. It seemed more useful in a few cases of pharyngitis lateralis and mycosis of the pharynx.

Lysol had not been much used. In half to two per cent. solution it seemed a good antiseptic spray in cases where it was the custom to use carbolic acid solutions. It frequently proved very irritating to the mucous membrane, and its use was discontinued.

Thiol had not proved useful as yet. Absence of staining properties and disagreeable odours made it more pleasant for intranasal use than ichthyol.

Ortho-mono-chlorphenol had been used extensively in atrophic and ulcerative rhinitis and eczema alæ nasi, and the secretion and crusts were lessened very promptly by its use, and excoriations healed kindly.

A twenty-five per cent. solution in glycerine was used, but this twenty-five per cent. solution should be used by the physician only, and made as frequently as necessity demands. The drug was useful in ulcerations on the septum or turbinated bones, and in atrophic rhinitis most brilliant results were obtained. It was also useful in chronic naso-pharyngitis where the post-nasal secretion was excessive. Thus far the use of the drug has been satisfactory and gratifying, but they had not yet used it in the larynx.

In discussing Dr. Munger's paper, Dr. T. P. BERENS said he had used ortho-chlorphenol since 1884. He called attention to its anæsthetic effect, and said it numbed the base of the tongue when applied for irritation. He had found it useful in ethmoidal disease, where frequent application of the pure drug upon a very small tampon to polypoid or beginning polypoid degeneration gave good results.

Dr. GLEITSMANN said he had been using mono-chlorphenol, and had not found any anæsthetic properties. He used it in a two and a half per cent. solution. He said he wished again to draw attention to the anæsthetic property of antipyrin. In acute tonsillitis he injected two to five drops of a fifty per cent. solution, with the desired effect.

Dr. NEWCOMB said that a five per cent. solution of guaiacol upon a pledget of cotton could be applied to the nose with complete anæsthesia, and could be used in the ear when performing paracentesis of the drum membrane.

Dr. SMITH said he thought all the coal-tar series had an anæsthetic effect.

Dr. MUNGER said he did not want them to think that they used ortho-chlorphenol in full strength, except in cases of ulcers, where it did good.

Primary and Secondary Pharyngeal Tuberculosis, from a Clinical Standpoint.

Dr. WALTER F. CHAPPELL read a paper with this title.

Opinion differed as to whether tuberculosis could be engrafted primarily upon a mucous membrane. Dr. Chappell gave the history of three cases of tubercular pharyngitis, two of which were secondary and one primary.

In the first case the tuberculosis of the lungs was in an advanced stage. On the tenth day after the apparent infection of the pharynx yellow spots appeared and went on to ulceration, the patient dying six weeks after the pharynx became affected. Dr. Chappell showed cuts illustrating the condition at different stages of the process.

The second case received various treatment without relief, and four weeks before death the pharynx became affected; first a thickening of the mucous membrane, formation of yellow spots, and then breaking down and the formation of ulcers.

Case III. was a woman, nineteen years of age, who in 1895 came under treatment for post-nasal discharge and swelling of pharyngeal tonsil. The adenoid tissue was removed, but she afterwards returned complaining of chills. New tissue, hard and resembling adenoids, was

recognized, and the lateral folds of the pharynx, especially on the right side, appeared as thickened ridges, and a few days after the throat was sore and glands enlarged.

There were no symptoms of pulmonary affection ; the patient had always been well, but, some months before, she had attended a sister who had tuberculosis, and after her patient died she occupied the same room, and slept in the same bed the sister had used during her illness.

A specimen of the lymphoid tissue was sent to Dr. Wright, who found tubercles in great numbers, and the diagnosis was made of miliary tuberculosis.

In discussing Dr. Chappell's paper, Dr. GLEITSMANN said he had seen but one case of primary pharyngeal tuberculosis, but he thought that if a tubercular infection was found in the pharynx, and no lesion anywhere else, it was proper to call it a case of primary tuberculosis of the pharynx, from a clinical standpoint at least. He would like to call attention to the fact that in treating cases of tubercular laryngitis or pharyngitis, the physician might be led to think the ulcers had healed, on account of the appearance of a seeming cicatrix, while investigation would show it to be only an accumulation of secretion, with the active process beneath. He had also been struck with the fact that patients often had large ulcerations, yet complained of very little pain. He had a case in which three-fourths of the epiglottis was eaten away, yet the patient did not complain of pain. Eight years ago he had a case of primary pharyngeal tuberculosis, which was cured, and had remained well ever since.

Dr. WRIGHT presented a microscopical specimen from the tissue sent to him by Dr. Chappell. He said he was interested in the case, as it came in a line of research he was trying to carry out. It was a question whether the lymphoid tissue was infected previous to the removal of the adenoid, or whether it gained entrance through that channel ; but the swelling that appeared a week after the operation would hardly be due to an infection at that time, yet might be only the inflammation from the operation, and the manifestations that came on four weeks later might be the first appearance of the tubercular process.

He had taken twelve tonsils from healthy children and put them into the abdomens of guinea-pigs, and none had developed tuberculosis. Five or six years ago Massei had written to him concerning finding tubercle bacilli in healthy noses and throats. Two or three years later Strauss, in Paris, had found tubercle bacilli in the noses and throats of many attendants in the hospital for phthisical patients. As it is pretty hard to find the bacilli, it is quite probable they existed in healthy noses and throats quite frequently. So far the evidence went to show that lymphoid or adenoid tissue could be the seat of infection as well as any other, but, considering the great number with pulmonary disease, it was a great wonder that more cases did not occur in the lymphoid tissues.

Dr. HANCE said he had never seen a case of primary pharyngeal tuberculosis. He had been making some further experiments upon the source of infection, and found that the dust removed from an area an inch and a half square on the surface of a room in which two brothers had died of tuberculosis gave tuberculosis to a guinea-pig in thirty days.

Dr. MAYER said he thought mucous membranes once diseased gave entrance to the tubercle bacilli and infection, and the case under consideration seemed to indicate this fact. Healthy mucous membrane repelled the bacillus, and thus gave us an idea how to prevent infection. He thought there were mild cases of lupus with subsequent tubercular infection.

Dr. SIMPSON said he was always impressed with the small number of cases of pharyngeal tuberculosis as compared with tuberculosis in other regions, and it seemed probable that it might be due to the fact that the pharynx was so often cleansed by gargles, cleansing the teeth, coughing, etc., and thus the bacilli became dislodged. The larynx could not be so thoroughly cleansed, and hence was more liable to become affected than the pharynx, and the liability was still greater with the lungs for the same reason.

Dr. HARRIS recalled a case of Dr. H. P. Douglas, in which the pharynx remained in a stationary condition for a time, and then the lungs became affected. In this case also the right side of the pharynx was affected.

Dr. NEWCOMB said he thought that the lesson could be drawn that it was not safe to operate unless the patient could be removed from the source of infection.

Dr. CHAPPELL said the condition at the start was just like an ordinary cold. A small portion of tissue was removed, its place was taken by a larger amount, and the process extended.

Dr. F. QUINLAN presented a *Pair of Adenoid Forceps* for cutting and scraping. They were in the shape of a cone, and had the advantage of occupying a small space in the rhino-pharynx.

Dr. W. F. CHAPPELL presented a *Base for the Application of Medicines to the Nasal Cavity and the Pharynx*. It was the oleostearate of zinc, and had the advantage of being a semi-fluid material not susceptible to the ordinary changes of temperature, could be applied alone or with various medications, and clung to the surface to which it was applied. It could also be used for intratracheal application.

Dr. GLEITSMANN said he found the forceps presented by Dr. Quinlan very useful, as they occupied but little space, and allowed of the removal of larger growths than other forceps.

Dr. R. C. MYLES presented a *Case of a Woman upon whom he had Operated Ten Days Before, Opening the Frontal Sinus on the Left Side*. There was a peculiar narrowing at the lower portion of the sinus near the opening of the infundibulum, and the back wall projected forward. There was now a polypoid growth near the floor of the infundibulum, which was not there before.

Dr. J. W. GLEITSMANN, in *presenting a Case*, said it was of interest, as there were but few cases in which it was possible to see the opening into the sphenoidal sinus. This case had come to him last week, complaining of nasal obstruction; the nose was filled with crusts, the removal of which revealed the sphenoidal sinus. The sinus was four inches from the alæ of the nose. Other than this the case was of but little interest.

Dr. WRIGHT said he and Dr. Gleitsmann had differed before as to

whether the ethmoidal sinus could be seen, and now he would have to say that he had a case in which he could see the sinus; the middle turbinated bones were greatly shrunken, and it was possible to see and probe the sphenoidal sinus.

Dr. R. C. MYLES said, as to measurements to the sphenoidal sinuses, he had found the average from two and a half to three and a quarter inches, as measured from the centre of the septum or from the middle of the alæ. He had found it four and a half inches to the back wall, but this was obtained by bending the end of the probe a little.

Dr. J. E. H. NICHOLS *presented Two Cases, the First an Epuloid Growth upon the Superior Maxilla.* The patient wore a plate, and it was possible that irritation from it caused the growth. There was no pain, but the tumour was growing rapidly.

The *Second Case* was a girl in whom there was no definite history of hereditary syphilis, and the condition simulated lupus. About five months ago there had been noticed a discharge from the nose. There were perforation of the soft palate, and ulceration with partial destruction of the cartilaginous and bony portions. He had not had an opportunity to put the patient on the iodide treatment.

Dr. CHAPPELL *presented a Second Case*, a man who had been before the section on a previous occasion for the purpose of diagnosis. Since that time he had had to have a tracheotomy performed, on account of a carcinoma of the larynx. He presented the case because he thought the section would be interested in it.

Dr. WRIGHT said the woman whom Dr. Chappell had presented had come to his clinic, at one time, in a very reduced condition. She had improved rapidly upon iodides, but developed nervous symptoms, and had been transferred to that department.

The Chairman (Dr. NEWCOMB) *presented a Woman* who was employed at the Roosevelt Hospital, in the laundry. Five years before, she had "blind boils," and had been troubled with her hair dropping out in the spring. Six months ago she had a sore throat, caught cold, got worse, began to cough, had some post-nasal dropping and nasal discharge. The sputum was free from bacilli. The uvula was long, and a portion had been excised, a part of which had been sent to Dr. Wright and part he examined himself. There were round-cell infiltration and thickening of blood-vessels, with some new connective tissue. The patient had been treated with lactic acid, but, after microscopical examination, had been given mercurial inunctions and small doses of iodide, the patient being intolerant of the latter. There was infiltration of the epiglottis, uvula, soft and hard palate, and though the amount of potassium iodide administered was small, yet the infiltration was much less.

Dr. SIMPSON said, in regard to Dr. Nichols's case, that in epulis the prognosis should be guarded, as it was likely to become malignant. He mentioned a case of a patient about forty years old, in whom a seemingly benign tumour had become malignant with fatal result.

Dr. BERENS said he had seen a case of necrosis similar to that presented by Dr. Chappell. He had discovered a chestnut worm in the tonsil.

Dr. QUINLAN asked why Dr. Wright had suspected that the case presented by the Chairman was a case of lupus.

Dr. WRIGHT said it looked like a case of lupus, but the microscopical examination had proved it to be specific. He thought that often cases of suspected lupus would be found to be specific when put upon the iodide treatment.

Dr. SIMPSON asked if the case Dr. Chappell presented with carcinoma had been examined microscopically. It had.

Dr. MYLES said the case presented by the Chairman looked like a case of syphilis.

Dr. NEWCOMB said that in cases of lupus, when they were put upon specific treatment they usually got worse and suffered more pain. This patient was hopeful, and always thought she was getting on well, and was pleased with what was being done for her.

Dr. BEAMAN DOUGLASS *presented a Case of Primary Carcinoma of the Inferior Turbinate Bone.* He said that the literature gave a number of cases, but not many were confirmed by microscopical examination. There were only two cases reported previous to this that were primary and intranasal in origin. The patient presented gave a negative history on the mother's side, but the father had had a foetid discharge from the nose, disease of the antrum, later the right eye involved, and frontal sinus disease. The patient was thirty-one years old; was always nervous; noticed nasal trouble five years ago; now there was a mucous discharge from the left side; some bleeding after picking; and a year ago had a severe hæmorrhage. Some pain developed a year ago; the lachrymal duct was stopped; the skin was not discoloured; the patient was weak, but had not failed much. The right nostril was normal. There was an ulcer on the left side, which looked much like atrophic rhinitis when scab was removed. The pathologist had reported that it showed the characteristics of carcinoma.

Dr. HOLBROOK CURTIS *gave the History of a Young Woman Thirty Years Old, who had come under his care for So-called Rose Influenza.* She had been unable to pass a flower-stand without being prostrated; had been nearly all over the world in search of relief, without obtaining any. It had occurred to him that he might treat her by suggestion. He told her that if she desired he would give her hypodermic injections of the extracts of the pollen and leaves of different flowers. He had begun with the rose, the lily-of-the-valley, the violet, and others. In about three months she was able to stand the presence of roses. He had begun this treatment over a year ago, and at the present time she could sleep in a room containing any variety of flowers. He left it to the opinion of the members of the section whether the success was due to suggestion or to some virtue in the hypodermic injections. Dr. Curtis made these remarks preparatory to a possible communication regarding experiments on hay fever.

Some Remarks on Nasal Obstruction, with a Description of a Naso-manometer; Naso-Pharyngeal Auscultation.

Dr. JONATHAN WRIGHT read the paper upon these subjects, and said that the statements of the patient could not be relied upon for the

detection of nasal obstructions, for they were often misleading, the patient complaining of something else. In cases of obstruction due to new growths, the development was so slow that the patient had probably not experienced any inconvenience from it. As there were so many circumstances interfering with a correct diagnosis, it had occurred to him that a naso-manometer might be constructed, and he presented one that he had made and found of service. It consisted of a graduated U-shaped tube, partially filled with coloured liquid, to which was attached a rubber tube, and to this a small metal tube. The small metal tube was placed at the patient's nostril, and by comparing the varying height of fluctuation of the liquid when the patient inspired the patency of the two nasal canals could be compared. It was also possible to establish a relative standard for normal respiration, which would aid in detecting nasal obstruction. The naso-manometer could be hung on the wall, or attached to the stand on which other instruments were kept.

Dr. Wright called attention to the fact that the nasal alæ often formed an obstruction to respiration. This might be due to paresis of the nasal muscles of respiration; and he had been able to cure cases of this kind.

In children, adenoid growths were often the cause of nasal obstruction. The child, if it could make statements, could not aid in leading to a diagnosis; and in some cases there were very slight symptoms of obstruction. He thought that auscultation could be used with benefit in these cases. By placing the stethoscope on the back part of the cheek, it was possible to detect a change in the respiration in cases where there were adenoid growths.

Dr. Wright spoke of bony cysts in the nares, and said the idea had long existed that they were due to hypertrophy of bone, and folding over, as it were, of the outgrowth of bone. This did not seem to explain it, for there were very few glands in the cysts; it was hard to conceive of the outgrowth of bone connecting with the bone above to form the cyst, and then none had been seen in the process of development. He thought that the cysts were due to rarefying process in the bone itself. They occurred quite often in chronic cases, and nearly always were found in women.

Dr. GLEITSMANN said he had used the naso-manometer, and it had proved fairly successful, and he thought it would be especially useful in discovering obstruction in the posterior portion of the nares. Dr. Wright had also called his attention to naso-pharyngeal auscultation, but although he had not had much time to try it, he had been able to detect a varied sound in case of adenoid growths.

Dr. RICE said a number of years ago Dr. Andrew H. Smith showed him an instrument similar to the one presented by Dr. Wright, but he thought it had never been perfected. He was pleased with the happy way the writer had put the symptoms of nasal obstruction as stated by the patient. The point in regard to obstruction from the dropping down of the alæ was one that was not appreciated. The septum of the nose without deviation or ecchondroses might be so thick as to virtually cause nasal obstruction.

Dr. KNIGHT said, in reference to Dr. Wright's statement that no

intermediate condition had been seen in cysts that formed in accordance with Macdonald's theory, that when he wrote his article he had a case in which there was a tubular appearance of the bone, anterior and posterior openings being present, but he now thought it was a case in which the bony wall of the cyst had become disintegrated.

Dr. NEWCOMB said he had seen a case in which there was a curving inward of the middle turbinates, but he had not thought of it being an intermediate stage of cyst formation. He had used auscultation in diagnosing obstruction, and he had heard sounds he could not describe. He had not had enough experience to determine much from it yet.

Dr. A. RUPP said he recently treated a case of rheumatic unilateral facial paralysis in which the nasal muscles were implicated, and nasal respiration of the side affected impeded. As the paralysis was recovered from, the patient himself had noticed improved respiration through the nostril that had been faulty.

The Constitutional and Local Causes of Nasal Hæmorrhage, and the Methods of Controlling it.

Dr. CLARENCE C. RICE read the paper on this subject, and said dangerous cases of hæmorrhage were not common, but they came occasionally, and were hard to treat. The etiology might be classed as due to constitutional and local conditions and traumatism. He had found that the dangerous cases were those due to constitutional changes, change in blood-pressure, change in the blood-vessels, and change in the blood. There was often a local condition in the nose that added to the disposition to nasal hæmorrhage. Cases of hæmophilia he did not think were common. Often there were renal, cardiac, and other conditions present, that produced conditions favouring bleeding. Mental conditions also favoured bleeding. Nose bleeding was quite common in boys about the age of fourteen or fifteen.

It was rare to see nasal hæmorrhage where the mucous membrane was moist. It was only necessary to mention nasal hæmorrhage from trauma. There were some unusual cases due to varicose veins of the nose, and some due to over-exertion. All were familiar with the nasal hæmorrhages due to acute diseases, febrile conditions, etc.

In treating nasal hæmorrhage it was important to locate the bleeding point, and this was generally upon the septum or the floor of the nose. Sometimes the spot was high up and hard to see. He had seen only one case of bleeding from the turbinated side.

It was very important to treat the cause: if due to renal disease, treat it; if cardiac, treat that, etc. It was important to have a smooth nasal septum, and for this it was an excellent plan to use friction as described in a previous paper. Posterior nasal plugging might be of service in general practice, but in the hands of an expert it was not necessary.

With the aid of a speculum and a good light the bleeding point could be located, and compressed with antiseptic gauze cut in strips. If bleeding due to trauma and not secondary, douching with hot Seiler's solution was excellent. Cocaine would be an ideal remedy were it not

that it was followed by a determination of blood to the part. A tampon of cocaine was better than a spray. The galvanic cautery might be applied to the bleeding point. If there was much hæmorrhage, anterior plugging could be resorted to, and this could be most easily done with cocaine. It was well to begin plugging on the floor and build up and forward.

Dr. WRIGHT said he thought Dr. Chappell did not mention post-nasal adenoids in children as a cause of hæmorrhage.

Dr. MAYER said he thought that it would be frequently found that boys about fifteen that had nose-bleed were masturbators. Iodoform gauze was quite a favourite for plugging. He thought it better to introduce a small catheter, attach a string, pull it into the nares after attaching the gauze, and then pack. He had seen a case of severe hæmorrhage from both nostrils caused by a sarcomatous growth.

Dr. A. RUPP asked Dr. C. C. Rice whether his quotation from Bosworth's book coincided with the experience of all other specialists. His own experience contradicted the opinion that when constitutional diseases are present the nasal hæmorrhage is usually from both nostrils. When bleeding from the nose has continued for a time, the blood often regurgitates around through the other nasal passage, thus giving the appearance of bleeding from both sides of the nose.

Dr. COFFIN said he thought in a case of hæmorrhage sufficiently severe to demand a posterior plug that we had but little time for cocaine, and, in fact, that the cocaine would be so much diluted by the blood as to be of little use.

He reported two cases in which severe secondary hæmorrhage had followed the application of the galvano-cautery to the posterior end of an inferior turbinated bone.

He said he had found the best plug to be a conically shaped cotton plug, made by taking sufficient absorbent cotton, tying string about its middle, and then doubling the cotton upon itself and the string, and taking two or three half-hitches about the free ends of the cotton. The small end to be drawn into nose.

The best styptic he had found to be a sat. sol. of the aceto-tartarate of alum.

Dr. GLEITSMANN said he had used punk to stop nasal hæmorrhage, and found it quite useful. It absorbed moisture, and in twenty-four hours could be easily removed.

Dr. QUINLAN said he found chromic acid excellent. It could be fused on a probe, and applied to the bleeding part. He could not value it too highly. It had advantages over all other agents that he knew.

Dr. PHILLIPS said he thought the writer had omitted to mention internal treatment in these cases, such as ergot, ergotine, etc.

Dr. RICE said he simply quoted Dr. Bosworth on hæmorrhage from both sides of the nose in constitutional diseases. Most of his cases were unilateral. He had mentioned internal medication.

T. P. Berens.

SOCIÉTÉ FRANÇAISE d'OTOLOGIE et de LARYNGOLOGIE.

(Continued from page 30.)

(From "La Semaine Médicale.") Reported by Dr. JOAL.

M. GELLÉ (Paris). *The Treatment of Labyrinthine Vertigo.*

After a few historical remarks, M. Gellé briefly described the anatomical and functional conditions, which make of the labyrinth an active centre of reflex excitations or inhibitions, which are made manifest by labyrinthine vertigo.

Motor, psychical, and sensory disturbances, and disturbances of general sensation, are reactions from the labyrinth. The patient retains consciousness; often he is warned by an aura of the approach of an attack.

After showing that the majority of the lesions of the ear end in compression of the inner ear, Dr. Gellé analyzed the pathogenesis of vertigo *ab aure lesa*, and on this basis founded his indications for treatment, medical and surgical, of auricular vertigo. The treatment includes practically the whole of otiatry: inflation and aspiration of air, rupture of adhesions, passive movement of the apparatus of transmission, dilatation of the tubes, section of cicatrices and of tendons of muscles, extraction of the ossicles, of the incus, mobilization of the stapes, etc., etc.—in short, all operations tending to remove pressure from the labyrinth.

The author next reviewed intralabyrinthine affections. The treatment for hæmorrhage is leeches to the mastoid process, cupping of the back of the neck; purgatives, milk diet; paracentesis of the membrane if there is any hyperæmia of the tympanum, or any previous lesion of the ear; sulphate of quinine in large doses at first; colchicine, etc., for gouty patients; hypodermic injections of ergotine, etc.

The first symptom of albuminuria is frequently vertigo with labyrinthine apoplexy; if there is arterio-sclerosis or a cardiac affection with increased blood tension, milk diet and laxatives are indicated.

Vertigo often occurs along with congestions of the ear or head, with acute or subacute affections of the lungs, etc., and indicates a sudden or a permanent increase of the intralabyrinthine tension.

Intracranial tumours, compression of lymphatic vessels, obstruction of the return circulation, cold, heatstroke, sunstroke, all induce labyrinthine irritation and its consequences. Treatment is as above. Hot baths and exciting thermal waters are to be avoided. In chronic cases the circulation is to be regulated (milk, strophanthus, etc.), and arsenic and iodides are useful. In patients suffering from neurasthenia or arterio-sclerosis, cold douches and bromides are to be prescribed. The slightest affection of the ear increases the predisposition to the effects of the above-mentioned causes, and must therefore be treated.

Anæmia, from whatever cause, induces hyperæsthesia of the labyrinth and reflex hyperexcitability, the two principal causes of vertiginous affections. Tonics, a suitable diet, and country air rapidly improve the condition. Cardiac and renal affections and arterio-sclerosis must be

treated; if strength allows of it, most reliance should be placed on quinine sulphate.

Inflammation of the internal ear produces reflex vertigo and delirium, difficult to differentiate from a meningitis or a very acute otitis media. Pilocarpine, strychnine, quinine used as near the onset as possible, generally stop the vertigo; electricity and massage have also been used. If one believes in a condition analogous to glaucoma (auricular glaucoma), is not the indication to trephine the labyrinth or remove the stapes?

If syphilis, hereditary or acquired, attacks the labyrinth, the deafness and vertigo can be cured by specific treatment, specially by subcutaneous injections of mercury.

Hyperæsthesia of the labyrinth is found in anæmia, after diseases of the ear, injuries to the head or ear, and in various neuropathic and psychical conditions. It is the principal predisposing cause of vertigo; a permanent lesion of the ear serves as an occasional cause, and accounts for repetitions of the attack.

The treatment of this morbid condition and its results is sulphate of quinine in doses of 0.60 grm. to 1 grm. for eight days, to be repeated if necessary after an interval. If a neurosis coexists cold douches are very useful, and they are also useful even when the vertigo is due to serious (even suppurative) diseases of the ear, if nervous exhaustion is present, as, for example, after influenza. When there is neuralgia of the fifth nerve, or habitual migraine, quinine along with aconitine or arsenic again gives the best results.

In cases of toxæmia, of cerebral, pulmonary, or general microbic infections, the symptoms of vertigo should make one think of the ears; many poisons have an elective action on the labyrinth, *e.g.*, lead, oxide of carbon, soda salicylate, etc.

The internal ear is affected at a distance by diseases of other organs; thus, labyrinthine vertigo is often a symptomatic reflex. A pre-existing hyperæsthesia, or hyperexcitability of the labyrinth, will, of course, predispose to vertiginous attacks. Affections of the stomach have the greatest effect. Cure the dyspepsia and the vertigo ceases, but not the more obstinate deafness. Uterine affections, general diseases, traumas of distant parts, specially of the neck, produce vertigo.

In patients with hæmorrhoids, or gout, the vertigo is either congestive or nervous, often of otitic origin. The sclerosis evolves without any symptoms at the same time as the other more noticeable affections.

Vertigo, therefore, proves the existence of trophic lesions of reflex origin, or the development of alterations in the labyrinthine apparatus. A previous lesion of the ear predisposes to these reflex effects on the nutrition of the internal ear. The treatment must be directed to the causal lesion, not forgetting the actual labyrinthine hyperæsthesia.

M. L. BAR (Nice). *Acute Œdematous Laryngitis in Children.*

Little is said about acute œdematous laryngitis in childhood, yet this condition exists in the child just as it does in the adult. If it is seldom observed, that is because of the difficulty of examining, and specially of using the laryngoscope (which is the only sure method) in children.

Oedema is anatomically the same at all ages, varying according to the cause that has produced it. The narrowness of the larynx and the great looseness of the mucous membrane account for the rapid development and frequent fatal termination of this disease in children. The treatment must vary according to the cause and nature of the oedema. Local treatment is of most importance. Thus sprays strongly charged with tannin, revulsives, Priessnitz's compresses, hot water to the neck, and a gentle emetic, are often sufficient. Potassium bromide should be given internally, and aconite only used for spasmodic and febrile conditions. In serious cases little should be expected from laryngeal intubation, and it should be remembered that tracheotomy will be the more successful the earlier it is performed. To be effective it should be done before the laryngeal stenosis has caused grave symptoms of asphyxia.

M. RAOULT (Nancy). *Opening of the Tympanum for the Extraction of a Foreign Body.*

A girl, ten years old, had pushed into her left ear a button of the shape of a lentil, and seven millimètres in diameter. Unsuccessful attempts to extract this had only succeeded in forcing it through the membrane and into the tympanic cavity. I attempted to remove it under chloroform, but finding it firmly fixed by the swelling of the soft parts, I was compelled to open into the tympanum.

I detached the auricle, and dissected along the meatus as in Stacke's operation, then removed the upper external wall of the tympanum with a gouge. This enabled me to extract the button. The mucous membrane below was swollen and bleeding. I washed out with sublimate solution, then packed with iodoform gauze. It was dressed at first every second day, and later every third or fourth day; recovery was complete in twenty-two days. There remained only a slight atresia of the meatus.

M. VACHER (Orleans). *Three Cases of Otitis Media with Mastoid Complications cured without Surgical Intervention.*

A certain number of cases have been published during the last few years, in which patients with mastoid affections have been cured without operation. During the last eighteen months I have seen three such cases, in which, in spite of the gravity of the lesions, cure was obtained by as thorough and as deep-going antiseptic treatment as was possible, combined with the use of ice, revulsives, chloral, etc.

One should therefore not be in too great a hurry to operate, but rather watch the patient carefully, being ready to intervene at any moment. This is specially necessary in the case of children, who, owing to the incomplete closure of the petro-squamous suture, are the more liable to meningeal complications. In treating the tympanic cavity I make use of irrigations of peroxide solutions of 6, 8, 10, and 12 volumes. This cleans the parts more thoroughly than any other fluid.

M. L. EGGER (Paris). *Acute Oedema of the Larynx.*

A woman, enjoying fairly good health, although presenting signs of pulmonary induration, was suddenly seized (in consequence of the emotion

produced by her mother's death) with all the symptoms of acute laryngeal œdema. Three hypotheses may be advanced in explanation of this :—

(1) Vasomotor affections acting on a tuberculous larynx. Considering, however, the good condition of the organ, this explanation may be dismissed.

(2) Infectious œdema, perhaps due to influenza.

(3) Vasomotor disturbances, causing a simple acute angio-neurotic œdema in a tuberculous subject. This is the most probable hypothesis.

M. BONAIN (Brest). *Long and Short Tubes for Intubation of the Larynx.*

The ease of extracting short tubes, without using the extractor, by simple pressure on the trachea, does not compensate for the real danger of their being obstructed either during or after their introduction. This danger is much less to be feared with a long tube reaching down to the lower part of the trachea, and the difficulty of extracting the tube can best be overcome by leaving the thread in position.

M. Bayeux's theory that O'Dwyer's tubes are held in the larynx by the cricoid ring is wrong, as is shown by measurements. The tube is prevented from slipping out by the vocal cords.

M. G. GELLÉ (Paris). *Hydrogen Peroxide in Oto-Rhinology; its Hæmostatic Action.*

This is an excellent hæmostatic, and should be kept by all specialists and all practitioners to treat epistaxis that resists other agents. According to the author this is the ideal hæmostatic, because its action is prompt, causes no pain, and is perfectly innocuous.

M. JOUCHERAY (Angers). *Suppurating Cysts of the Nose.*

A woman, thirty years old, had complained of nasal obstruction for two or three months, and of loss of appetite and of sleeplessness for eight days. The following were the symptoms : fever, almost typhoid condition, swelling of the whole left side of the face, nasal voice, oral respiration, and discharge of thick creamy pus from the left nostril. The left nasal fossa was found full of pus. With the curette I removed (1) some cretaceous masses, forming incomplete cells, very friable, and as large as a medium-sized hazel nut—these lay at the level of the middle and inferior turbinateds ; (2) some smaller masses, like sebaceous concretions ; all bathed in pus. Only a few drops of blood came away at the end of this curettage. The nose then appeared permeable—almost normal, but the mucous membrane was red, rough, and a little hypertrophied, specially in the middle meatus. I did not wash out the nose, but applied chloride of zinc 1 in 20, then a large quantity of vaseline and boracic acid, and a tampon. Ten days later the patient returned cured, the general condition much improved ; the mucous membrane of the left nose somewhat hypertrophic, but no pus.

This was a case of multiple suppurating cysts of the inferior and middle turbinateds, without extension to the adjacent sinuses. Further, there was a cretaceous degeneration of the walls, with a sebaceous

appearance of the contents of the cysts, which had not yet been liquefied by the suppurative process.

M. CASTEX (Paris). *On Trephining the Mastoid.*

Opening of the mastoid process is required (1) to evacuate pus from secondary mastoiditis (after measles, scarlatina, etc.), (2) to stop obstinate otorrhœas persisting from childhood, and resisting all other forms of treatment, (3) to put an end to secondary neuralgias of the process.

The spine of Henle (spina supra meatum) forms a very good guide to the antrum. Great caution must be exercised, specially in the region of the posterior wall of the meatus, lest the facial nerve be injured. The lateral sinus has been encountered in this region, but with no bad results. Little tampons of cotton wool, introduced into the bottom of the field of operation, lessen the shock of the gouge, protect the deeper parts, and on being withdrawn bring away with them any *débris* detached by the gouge. Moist dressings and disinfection of the naso-pharynx are indicated in suppurative tympanitis.

The excellent effect of the petro-mastoid evacuations is striking, because pus shut up in the cavities of the ear seems particularly infectious.

M. MIOT. *On Permanent Artificial Perforations in the Membrana Tympani.*

After having given the indications and counter-indications for this operation in dry otitis media, the speaker declared the most successful form of operation to consist in removal of the membrane along with the handle of the hammer. By this means he had obtained permanent openings twenty times out of twenty-four operations.

The following conclusions were arrived at :—

The best means of completing diagnosis in dry median catarrh is paracentesis of the membrane.

In certain cases, where the operation seems indicated, it must be postponed or given up because of reflex action on the ear.

The best operation is excision of the membrane with the handle of the malleus.

Discharge may take place after perforation, but soon stops without any complications.

Hearing power, though improved, varies greatly. The improvement is much more marked for articulate sounds than for noises. Vaseline and iodine applied from time to time, sometimes glycerine, appear to be the fluids that give the best results as regards hearing power, without causing any serious complications.

An artificial membrane sometimes greatly improves the hearing power.

M. BRINDEL (Bordeaux). *Results of the Histological Examination of Sixty-four Adenoid Vegetations.*

In thirty-nine of these the superficial epithelium had undergone profound alterations, or at least modifications of structure. Many adenoids in adults contain no fibrous tissue framework, and therefore have no

tendency to undergo sclerotic changes. Thirty applications of resorcin to such a case had no effect. In one case in which removal was followed by hæmorrhage I found endarteritis.

I found an affection characterized by retention of epidermic and microbic *débris* and mucus in a crypt closed at the surface. This may be called *lateral lacunar encysted adenoiditis*. Tuberculosis I found only eight times out of the sixty-four cases, but think that is less than the true proportion.

M. WAGNIER. *Direct Laryngoscopy.*

The speaker gave an account of his experience in the use of Kirstein's method of examining the larynx. In certain cases it is easy by this method to make a complete laryngoscopic examination. Its chief use in adults will be for examining the posterior wall of the larynx, but it is with children that it is likely to have its greatest success.

M. P. RAUGÉ (Challes). *Acoustic "Relief" and Binaural Hearing.*

Monaural hearing gives no information as to the direction of sounds. For this (which is to hearing exactly what "relief" is to vision) a bilateral apparatus is necessary. The mechanism by which such a bilateral apparatus gives us the idea of acoustic relief is precisely comparable to that of optic relief; it consists in a dissimilarity in the two sensations experienced by the two sides of the apparatus.

The separation and the different direction of the two ears determines an inequality in the auditory impressions received by them, because any sonorous body, except it be in the mesial line, must be more favourably situated towards one ear than towards the other as regards both incidence and distance; thereupon a sort of unconscious calculation gives us the idea both of the direction and the distance from which the sound comes. Is not this identical with the process by which we perceive objects in space by comparing the two plane images perceived by the two eyes?

That this is not mere theoretical argument is proved (1) by the clinical fact that patients suddenly deprived of the hearing power of one ear lose all idea of the direction of sounds (paracsis of position); (2) by the fact that if in a healthy subject one ear is carefully stopped, he can no longer tell from what direction sounds proceed, but recovers that power the moment the ear is freed and bilateral hearing is restored.

M. POLS (Nantes). *A Phosphatic Rhinolith formed round the Kernel of a Cherry.*

This, occurring in a woman fifty-four years old, had caused local and general symptoms such as to raise the suspicion of malignant disease. From its position it had evidently entered the nose from behind. It was extracted, and found to consist of an irregular grey-coloured deposit of calcium phosphate and carbonate, and a little organic matter, but with no alkaline chlorides.

M. LABIT (Tours). *A Case of Eunuchoid Voice.*

There are two kinds of false voice. The one accompanies alterations in the genital organs, the true "eunuch's voice"; the other is produced by

a larynx of normal dimensions, but with some defect of the muscular actions, the "eunuchoid voice." During last year I had under observation two such cases. In the first a space was left between the posterior ends of the vocal cords. In the second the glottis presented an elliptical opening. Vocal gymnastics cured both cases easily and rapidly. It ought to be remembered that when cured the voice is bass. As to the cause, probably there are more than one.

M. MENDEL (Paris). *A Case of Bezold's Mastoiditis.*

The characteristic of Bezold's mastoiditis is that the pus from the antrum, instead of bursting through the external wall of the process, comes through the internal wall at the digastric fossa, works along the digastric muscle, then under the sterno-mastoid, and along the carotid sheath. Only twenty cases have been reported. In almost all, either during or after an otitis media, a painful spot appeared at the superior point of attachment of the sterno-mastoid, followed by a fluctuating swelling there. From that stage, surgical treatment only is of any avail.

I saw one case from the very beginning. The patient was a man thirty-two years old. Fifteen days after the onset of an otitis media he complained of pain in the above-mentioned spot, increased by rotatory movements of the head. No redness nor tumefaction. Soon the patient found that on pressing deeply over this spot he caused a flow of pus from the meatus. As the otitis proper got better the membrane tended to heal, thus shutting in the pus of the cervical abscess, whose only exit was through the tympanum and meatus. I performed paracentesis five times, and by means of injections and instillations per meatum obtained a complete cure in eight months.

M. H. LAVRAND (Lille). *Mutism without Deafness.*

What is the prognosis, and what advice is to be given with regard to children of three, four, and five years of age who do not speak, but who hear perfectly?

The author investigated mutism in children who are not deaf, and who understand what is said to them. Three cases were specially chosen out of a large number, so as to eliminate idiots. In these three cases careful examination showed no abnormality. Vision, hearing, intelligence, the sensory centres for language, as also the psychical centres, all normal. He even believed that the motor centres for articulation existed, and were connected to the other centres for language, but their function was in abeyance. A special gymnastics, a particular education of these centres, was necessary; under this special treatment their latent activity was finally stirred up, and the children spoke.

M. F. FURET (Paris). *Tonsillar Cough.*

Tonsillar cough, which can arise from any pathological change in the tonsil, is to be explained by the complex innervation of this gland, viz., "the tonsillar plexus" of Andersch, formed by the glosso-pharyngeal, lingual, pneumogastric, and spinal accessory nerves. Further, the position of the tonsils is in close relation to the muscular pillars of the

fauces, which again are closely related to the muscular apparatus of the larynx.

The cough is violent and spasmodic, is accompanied by reflexes in neighbouring organs, specially by a flow of tears, and is distinguished from cough due to affection of the respiratory passages by the complete absence of expectoration, and by the fact that ordinary medication has no effect.

Excision of the tonsil in children and removal with the punch in adults are the best methods of treatment.

M. LUC (Paris). *Chronic Empyema of the Frontal Sinus with Granulations; Cure.*

The treatment adopted was that already described by Luc ("Semaine Médicale," 1894, p. 277), consisting of a free opening of the sinus through the frontal bone, curetting and cauterizing the cavity, introducing a drainage tube through the sinus into the corresponding nostril, and closing the wound at once. The tube, being wide above, remains of itself without any special fixing. Through it is injected every day during the first week a one per cent. solution of formol, then a solution of iodoform in ether to keep the parts aseptic. When the purulent discharge has ceased—that is to say, in from ten to twenty days—the tube is pulled out. The first dressing should be removed after four or five days, by which time the wound has healed. This operation was first devised by Ogston, of Aberdeen, and has advantages over any other method. Treatment by syringing from the natural nasal orifice should be tried only in acute cases. Immediate closure of the wound avoids the risk of post-operative erysipelas, considerably shortens the after-treatment, and makes the cicatrix as little visible as possible.

M. SIMONIN (Limoges). *Subglottic Œdema preventing Removal of Canula.*

In two cases of inter-crico-thyroid laryngotomy (one his own and one M. Moure's), in which subglottic œdema prevented removal of the tube, the speaker considered that the difficulty was due to injury to the cricoid ring. It is therefore important, when operating on children, not to carry the incision too high.

M. MOUNIER (Paris). *Treatment of Hæmatoma of the Septum.*

Hæmatoma of the septum, a rather rare result of injury to the nose, presents as a considerable swelling on both sides of the cartilage, impeding respiration to a greater or less extent. It ought to be opened freely and soon, because if left alone the cartilage necroses, and pus is found in place of the blood. After opening with bistoury or galvano-cautery, the pocket should be washed out with Van Swieten's fluid. A complication deserving more notice than has been given it is permanent deviation of the septum.

M. JOAL (Mont Dore).—*Aphonia of Olfactory Origin.*

I have already proved that a close relation of cause and effect exists between certain olfactory sensations and certain vocal disorders, and

have shown that the alterations may affect different parts of the human organism, involving modifications of the resonant, the vibrating, or the motor element.

Out of the ten cases I had then gathered, only one had been examined laryngoscopically, and the aphonia was found to be due to congestion of the larynx. In another case there was, undoubtedly, phonetic spasm.

To-day I wish to bring before your notice the case of a young boy who was seized with adductor paralysis, after being exposed to the influence of menthol during his sleep. There were no local hyperæmic phenomena.

The irritation of the nerve-endings of the olfactory nerve induced a reflex turgescence of the erectile tissue of the nose and an excitation of the twigs of the trigeminal; this produced a second reflex, ending in paralysis of the constrictors of the larynx.

Arthur J. Hutchison (Trans.).

VIENNESE SOCIETY OF LARYNGOLOGY.

Meeting, 5th December, 1895. ("Annales des Maladies du Larynx," etc.

President—Prof. STÖRK.

KOSCHIER presented a patient who had suffered four years from a *Wound of the Larynx*, after having been upset by a milk cart.

There was manifest difficulty in deglutition and breathing, for which causes she came to the hospital.

On the external surface of the neck there were several sanguineous deposits; palpation of the hyoid bone, also of the two plates of the thyroid cartilage and of the cricoid cartilage, showed nothing abnormal.

Only in the region of the right superior cornu of the thyroid cartilage was there a spot sensitive to pressure. On laryngoscopic examination there could be distinguished in the right pyriform sinus a large hæmatoma, by which it was almost entirely filled, and which extended below towards the right ary-epiglottic folds, which together with the ventricle it entirely enveloped, and this caused some laryngeal stenosis.

The left half was normal.

In phonation the right half of the larynx was seen to be completely immobile.

Digital examination allowed him to distinguish very exactly the hyoid bone and the two cornua of the thyroid cartilage. This showed clearly that the upper right half moved over the inferior part, and explained the pain suffered by the patient; this place was certainly the location of the hæmatoma.

Basing his opinion upon these facts, Koschier thought the diagnosis of this case was a fracture of the right superior cornu of the thyroid cartilage.

EBSTEIN. *Report of a Case of Malignant Syphilis.*

The patient, a man thirty-seven years of age, was very badly nourished. Primary symptoms in October, 1894. In the course of the same month, iodide treatment. No consecutive exanthem; but, in the fifth month of the illness, numerous ulcerations on the head appeared, which cicatrized in two and a half months by means of thirty frictions with Zittmann's decoction and iodide of potassium. In July, 1895 (six months afterwards), an abundant nasal suppuration appeared, accompanied by a discharge of small bony particles. Re-entering the clinic of Prof. Kaposi, neither four months' general treatment nor a stringent local treatment could check the disease, which caused total denudation and necrosis of the vomer, the horizontal and perpendicular plate of the palatine bone, of the three right turbinateds, and of the left middle turbinated.

Moreover, there existed a diffuse gummatous infiltration of the nasopharyngeal roof and of the lateral wall of the pharynx, and an extensive perforation of the vault of the palate. The perpendicular plate and the cartilaginous septum were absolutely wanting. The case is remarkable for the extent of the destruction, produced thirteen months after infection, in spite of six and a half months of intensive treatment. The malignity of the disease is explained by the cachectic condition of the patient.

EBSTEIN also reported a *Case of Fluctuating Edematous Tumours in the Region of the Processus Vocalis, Pronounced Tumefaction of the Tracheal Mucous Membrane, and Dry Bronchitis, following the use of Amorphous Salicylic Acid.*

In the discussion following this last communication, HAJEK asked if fluctuating tumours were seen over the vocal processes, because it was well known that in this part the mucous membrane adheres very closely, and that there is no loose tissue.

EBSTEIN replied that the tumours were not situated directly upon the vocal processes, but in the immediate neighbourhood, projecting inwards.

STOERK said he had observed the evening before, at his clinic, a patient suffering from profuse rhinitis, having tumours of this nature situated directly upon the vocal processes.

WEIL asked Ebstein if the patient's attacks were the same as in the course of ordinary bronchitis, or if he were not troubled with bronchial asthma.

EBSTEIN replied that there was irritation as in simple bronchitis.

CHIARI drew attention to the well-known fact that salicylic acid, inhaled, irritated the mucous membrane. Also that for some time surgeons have given up the use of salicylic acid in laryngeal and tracheal operations.

RETHI showed a *Snare for Amputating the Anterior Hypertrophied Extremity of the Turbinateds.*

There is frequently difficulty in performing this operation. In cases where the extremity of the turbinateds, more or less circumscribed, is very prominent and has an irregular surface, it is easy to employ the snare, especially when the galvano-cautery loop is used, and by the momentary

penetration of the current a furrow is produced, then an artificial pedicle ; but in cases where the hypertrophy reaches the neighbouring mucous membrane, and is not pronounced, or if there is a smooth surface, and especially a swollen tissue which contracts at the first touch, the loop cannot be used.

The extremity of the turbinateds can also be removed by introducing the snare in front and tightening it from before backwards ; but this method frequently fails, because the metallic thread at the end of the instrument twists easily, thus preventing further diminution. It has also been proposed to insert a needle through the extremity of the turbinated (and Jarvis has had a special needle made), then to apply the wire, so as to prevent its slipping off ; but this method especially is so uncertain that it is little recommended. Galvano-cautery operations and ablation with the scissors meet much opposition, and are not always possible.

Rethi has made an instrument combining the needle and the snare, allowing the operation to be effectually performed at one time—that is to say, to pierce the extremity of the turbinated, and then to tighten the loop.

BIENENSTOCK. *Essay on the Statistics of Nasal Affections and their Consequences.*

The author describes, first, the different nasal affections according to their frequency, then presents statistics according to age, and divides them into eighteen curves, where the frequency of each disease corresponds directly to each age.

These embrace 3547 nasal affections (comprising 11,352 patients) observed during the years 1892-93 and 1893-94 at the laryngological clinic in Vienna. After the curves of chronic hypertrophic rhinitis and chronic atrophic rhinitis, it appears that at Stoerk's clinic catarrhal affections augment notably in frequency at the age of puberty.

Bienenstock insists again upon the influence of puberty in nasal affections ; he also develops a new theory on the etiology of deviations of the nasal septum.

R. Norris Wolfenden.

ABSTRACTS.

DIPHTHERIA, &C.

Armstrong, G. E.—*Antitoxin Fatalities.* "New York Med. Times," June, 1896.

IN an editorial, reference is made to the recent death of the child in Berlin from the use of antitoxin as a prophylactic. Mention is also made of a similar fatality which occurred in Portsmouth, Ohio, and which was reported in a late number of the "Journal of the American Medical Association." In this journal, also, Strueth has advanced the idea that the decrease in mortality from diphtheria, as shown by statistics, since the introduction of the antitoxin treatment, should not be

ascribed exclusively to that treatment. He thinks a very important factor is that the serum-therapy, though not absolutely harmless, is less harmful than the drug treatment formerly used, and favours hydro-therapy as a still better procedure.

A. B. Kelly.

Atwood, C. A. (Taunton, Mass.). — *A Case of Laryngeal Diphtheria; Tracheotomy; Recovery.* "Boston Med. and Surg. Journ.," April 23, 1896.

A CASE of laryngeal diphtheria where tracheotomy was performed on account of the great tracheal obstruction. The treatment consisted of injections of Gibier's antitoxin. The patient made a good recovery in about twelve days. Notwithstanding immunizing injections of antitoxin, all the other members of the family, with the exception of an infant at the breast, were attacked by the disease, but made extremely rapid recoveries. The author sums up strongly in favour of the antitoxin treatment.

St George Reid.

Beauchant. — *Scarlatina and Early Diphtheritic Angina.* "Ann. des Mal. de l'Oreille," Feb., 1896.

THE author thinks that the opinion held by many authorities that diphtheria complicating scarlatina only occurs late or during the convalescent stage is not exact. He thinks that these two conditions are only associated from the commencement. He relates four cases in detail, with bacteriological examinations, in which pseudo-membranous angina was accompanied with scarlatina, the eruption appearing three to four days after the onset of the angina. In two of these cases Loeffler's bacillus was distinctly observed. In his first observation there were three cases of scarlatina in a family where a little girl had presented three days before an angina with false membrane, not accompanied with eruption, which appears to have been clearly diphtheritic. The other cases are not so clear. The author analyzes them very carefully, and deduces the following conclusions:—
1. Diphtheria and scarlatina have relations much more intimate than is generally supposed. 2. Diphtheria may develop secondarily in the course of scarlatina or during convalescence. We see also not rarely scarlatina supervene in the course of a diphtheritic angina, and the two affections may be coincident. 3. In some cases when scarlatina is superadded to diphtheria it may modify profoundly the course of this disease, and even cause the complete disappearance of Loeffler's bacillus.

R. Norris Wolfenden.

Bernheim, P. (Berlin). — *Remarks on the Serum Treatment of Diphtheria.* "Therap. Monats.," June, 1896.

STATISTICS based on hospital results contain so many sources of error that but little reliance can be placed in them. The seemingly wonderful results obtained by serum treatment are more apparent than real.

The author lays no stress on bacteriological diagnosis of diphtheria in this paper, but deals entirely with "clinical diphtheria," as observed by him during the twenty years, 1876-96. Scarlatinal diphtheria and all cases presenting the clinical picture of lacunar or follicular tonsillitis are left out of account. It is quite certain that as diphtheria increases or decreases (both as to number and severity) so does lacunar angina; it is therefore probable that the same influences, that make of the pharyngeal and tonsillar mucous membranes a suitable culture ground for the Loeffler bacillus, also favour the growth of streptococci. Further, it is highly probable that very many of the cases formerly diagnosed "follicular tonsillitis" would now, from bacteriological investigation, have to be considered diphtheria.

The author then proceeds to deal with the alteration that has taken place in the virulence of diphtheria since he first knew it in 1876. His cases fall into three groups :—

1st	from 1876-1880 ...	57 cases with 15 deaths = 26·3 per cent. mortality.
2nd	„ 1881-1886 ...	222 „ „ 46 „ = 20·5 „ „
3rd	„ 1887-1896 ...	135 „ „ 19 „ = 14 „ „

This shows—without serum—a decline in mortality of twelve per cent. within twenty years.

The explanation of this is simple. Every doctor who has been in practice more than fifteen years, and has carefully watched the progress of diphtheria during that time, must be aware that the last eleven years represent the period of decline of a very severe epidemic, during which not only has the number of cases but also the virulence of each attack diminished.

The virulent cases, with purulent, stinking discharge from nose and mouth, that soiled the whole bed of the restless child, and changed the mouth into an ill-coloured slimy surface, and with the glands of the neck, right down to the clavicle, swollen and hard as boards: these cases were then as common as they are now rare. Even in such cases we used sometimes to see—often in a night—all these happy changes occur, which are now ascribed to the action of the serum.

The results obtained from serum treatment by different observers are absolutely contradictory. It raises the temperature, it lowers the temperature; it quickens the pulse, it slows the pulse; and so on. Again, the rapid disappearance of the pseudo-membranes and of glandular swellings in severe cases occurs apart from serum treatment; but far from being a sign to welcome, it is to be regarded as an almost sure forerunner of a rapid, fatal termination of the case.

Serum has no specific action; all the old symptoms appear now as they used to do in the old ever-varying manner.

The author has used the drug only four times. One case was recovering before the drug could be procured; the second recovered no quicker than his brothers and sisters who got no serum; the third recovered, but suffered from a coxitis, first on the right then on the left side, which the author unhesitatingly ascribes to the serum; the fourth died.

Neither clinical experience nor statistics has so far confirmed the hopes that were first raised by serum treatment, and they will be completely destroyed by the outbreak of the first severe epidemic.

Arthur J. Hutchison.

Krückmann (Neukloster). — *A Case of Poisoning by Behring's Serum.* "Therapeut. Monats.," June, 1896.

ON 21st January Dr. Krückmann went to the country to treat a patient for diphtheria. The patient coughed violently in the doctor's face. He, therefore, boiled the syringe he had just used and gave himself a prophylactic injection in the dorsal surface of the left fore-arm. A swelling about ten centimètres long by five broad at once appeared. No redness or pain. Half an hour later violent itching of the scalp came on, extending down into the neck, where it became more a prickling sensation. About half an hour later, on reaching home, there came on angina cordis, giddiness, tinnitus aurium, extreme weakness, and staggering. It required great exertion to go to his bedroom and undress. Temperature, 39° C.

The arm gradually swelled up, without, however, being specially painful. Later followed paralysis of the extensors of the fingers. There was no shivering, but extreme turgescence of the skin, so that the face was purple. Next the feet became ice-cold—this extending half-way up the calves—and an itching and

prickling eruption appeared over the whole body (feet only excepted). Skin dry; pulse imperceptible; oppression and distension of abdomen only slightly relieved by vomiting and small normal motions.

Several times faintness was so marked that *exitus lethalis* seemed probable. By nine o'clock in the evening this danger was past. Then several beneficial sweatings—each lasting only a very short time—came on, and towards midnight the rash began to disappear. No urine was passed till two o'clock next day (*i.e.*, twenty-four hours, nearly, from time of injection). By three o'clock recovery was far enough advanced to permit of return to work. The following day the lower lip swelled up, and the point of the tongue became more pointed, but only for a few hours.

The patient whom the doctor had injected with the same serum had no unusual symptoms. The day after receiving the injection he was much improved, with no fever, no complications, and wishing to get up. *Arthur J. Hutchison.*

Marsh, E. L.—*Diphtheria Treated with Antitoxin in Glasgow Fever Hospital* "Glasgow Med. Journ.," May, 1896.

THE effects of antitoxin treatment in this hospital have been very striking, a is shown in the following table :—

Year.	Admissions.	Deaths (per cent.).
1890	88	39·8
1891	80	38·8
1892	78	37·2
1893	153	40·5
1894	245	35·5
1895	179	14·0

During the year 1894 only nine of the severest cases were treated with antitoxin, but during 1895 all suitable cases were so treated. Along with antitoxin a throat spray of saturated boracic acid solution was used; also in very severe cases a steam soda spray; also whisky or brandy, and during convalescence tonics.

The results in tracheotomized cases were equally good.

Thus the lowest previous mortality under five years old was 77·2 per cent., as against 38·1 per cent.

„ „ „ between five and ten years old was 72·2 per cent., as against 25·0 per cent.

„ „ „ all ages was 76·2 per cent., as against 34·5 per cent.

The returns of the medical officer of health show that these results are not to be explained by any alteration in the type of disease prevailing during 1895.

The importance of early treatment is also brought out :—

Of those treated during first week15·9 per cent. died.

„ „ „ second „17·6 „ „

„ „ „ third „40·0 „ „

Arthur J. Hutchison.

Russell.—*A Review of the Antitoxin Treatment of Diphtheria.* "Birmingham Med. Rev.," June, 1896.

IN addition to a lengthy review of statistics that have been published, the author has compiled the following tables of cases occurring in the Birmingham General Hospital :—

TABLE A.
ANTITOXIN CASES, Oct. 11, 1894, to Nov., 1895.

Age.	Cases.	Deaths.	Percentage Mortality.
Under 1	1	1	100
1—2	6	5	83·3
2—3	7	3	42·8
3—4	4	1	25
4—5	7	5	71·4
5—10	15	4	26·3
10—15	10	0	0
15—20	3	1	33·3
20—30	5	0	0
Over 30	1	0	0

TABLE B.
Forty-six cases occurring in five preceding years treated without Antitoxin.

Age.	Cases.	Deaths.	Percentage Mortality.	Total Cases.	Percentage Mortality.
Under 1	2	2	100	2	100
1—2	10	9	90	13	69·2
2—3	7	5	71·4	8	62·5
3—4	8	6	75	11	54·5
4—5	4	2	50	6	33·3
5—10	12	5	41·7	19	26·3
10—15	1	0	0	3	0
15—20	1	0	0	1	0
20—30	0	0	0	0	0
Over 30	1	0	0	1	0

TABLE C.
TRACHEOTOMIES.

Age.	Antitoxin Cases.	Percentage Mortality.	No Antitoxin.	Percentage Mortality.
Under 1	1	100	2	100
1—2	4	100	9	88·8
2—3	4	25	4	100
3—4	3	33·3	7	71·4
4—5	5	60	3	66·6
5—10	4	50	9	44·4
10—15	0	0	0	—
15—20	1	100	0	—

Day of Disease when Patient admitted.	Antitoxin Cases.	Percentage Mortality.	No Antitoxin.	Percentage Mortality.
1	4	50	2	100 (33·3)*
2	11	0	4	75 (37·5)
3	10	30	5	80
4	8	50	4	50
5	4	50	0	0
6	3	66·6	0	0
7 and over	3	100	4	0

* Figures in brackets denote that doubtful cases are added to undoubted ones, and thus percentage varies.

The author thinks that the death rate of the tracheotomies performed in the cases treated with antitoxin affords the strongest evidence in favour of the treatment.

The following statistics are quoted :—

1.	Mortality before introduction of antitoxin	77.5 per cent.
	" after	52.4 (Körte)
2.	" before	59.5
	" after	48.4 (Metropolitan Hospitals)
3.	" before	79
	" after	34.5 (Marsh)
4.	" before	75
	" after	59.1 (Birmingham)

At the end of this very thoughtful and carefully reasoned contribution to this question, Dr. Russell once more lays stress on this diminution of the tracheotomy mortality, which he considers is the one unassailable piece of evidence that we have before us, and proves antitoxin to be of value.

Barclay J. Baron.

NOSE, &c.

Baber, Cresswell.—*Notes on the Diagnosis of Latent Abscess of the Maxillary Antrum.* "Brit. Med. Journ.," June 27, 1896.

THE author describes the recognized diagnostic methods, and recommends in doubtful cases puncture through the inferior meatus with Grünwald's trocar and canula. Where no pus appears on aspiration through the canula, he employs Grünwald's method of injecting air and inspecting the middle meatus for discharge of pus. Aspiration may also be repeated after the air injection—a manœuvre which after previous failure may give a positive result, due to the frothing of the pus, bringing the latter to the level of the orifice of the canula.

By tilting the head well back the most dependent part of the antrum may be reached by the canula. Grünwald recommends repeated diagnostic puncture when results are negative and symptoms marked, on the supposition that the cavity at one time contains pus, at another none.

In twenty-six cases the author has never failed to reach the antrum, and has seen no ill results.

Ernest Waggett.

Fürst, L. (Berlin).—*On the Treatment of Rhagades and Coryza Sicca in Young Children.* "Therapeut. Monatshefte," June, 1896.

DRYNESS of the nasal mucosa and the formation of fine fissures at the orifices of the nostrils are very common and troublesome affections in children. Painting with a one per cent. solution of nitrate of silver will cause any fissures present to heal, but does not affect the dryness of the mucous membrane, so the fissures return again. In young children the result of the dryness of the nasal mucosa is, first of all, that any mucus present is not removed sufficiently, but accumulates, mixed with dust and bacteria, into little lumps and crusts, which may interfere with nasal respiration to a very considerable extent. Further, the mucous membrane loses its elasticity, and even undergoes a kind of atrophy. Older children help the formation of the fissures by scratching inside the nose with their finger-points and nails. Treatment must, therefore, commence with the removal of all crusts, etc., which is best done by washing out with—

Sod. Chlorat.	0.5
Acid. Boric	1.0
Aq. Dest.	100.0

Then carefully paint with boro-glycerin-iodoïn (Byrolin; Graf & Co., Berlin). At the same time, fissures are to be treated, as above, with silver nitrate.

Arthur J. Hutchison.

Frank (Kirchheim and Tock).—*A Case of Aërial Goitre.* "Münchener Med. Woch.," No. 22, 1896.

THE patient, a man of fifty-three, who had never suffered with goitre and whose family was free from the disease, presented himself for treatment, with the following history. In 1870 he was wounded in the neck by a rifle bullet; whilst under treatment he felt a little crackling, as if something had ruptured. Some years later he noticed, on coughing, that a tumour developed in his neck which afterwards disappeared. On examination a tumour the size of a small apple is found on the right side in the jugular fossa. During coughing a tumour the size of the fist arose on either side. The author thinks that this is an aërial bronchocele, and not a tracheocele.

Michael.

Gleitsmann, J. W. (New York).—*Treatment of Diseases of the Accessory Cavities of the Nose.* "Annals of Ophthal. and Otol.," April, 1896.

THIS is a short paper on the diagnosis and treatment of empyema of the accessory cavities, not professing to be complete or to contain anything new. Only one or two points need be referred to.

Diagnosis.—If pressure on the anterior wall of the frontal sinus or tapping the glabella excites pain or increases the headache, "an affection of the frontal sinus is almost certainly present." Transillumination, although its value has been somewhat overrated, ought never to be omitted, as a positive result confirms a doubtful diagnosis. It is most useful in antral cases, but much less satisfactory in dealing with the frontal sinus.

Treatment.—Simple cases of antral empyema can be treated through the inferior meatus, but the more obstinate cases must be opened into through the alveolus or canine fossa. When in doubt as to whether a case is one of frontal or ethmoid disease, Gleitsmann prefers to deal first with the ethmoid cells, opening them, irrigating and applying powders and caustics.

In dealing with the frontal sinus, as intranasal treatment does not promise good results, the external operation is preferable; the incision should be through the eyebrow.

Opening the sphenoid sinus is not difficult, as the anterior wall is generally implicated and softened by disease. Sphenoid disease is not so dangerous as some American specialists consider it, but requires a longer time for treatment than do affections of the other sinuses.

Arthur J. Hutchison.

Hansell, Howard F. (Philadelphia).—*A Case of Acute Loss of Vision from Disease of the Ethmoid and Sphenoid Cavities.* "Philad. Polycl.," May 23, 1896.

REPORT of a case showing the following symptoms: A boy, aged seventeen, in fair health, was suddenly seized with severe headache, principally in the frontal region; this was followed by failing sight and mental dulness. Upon examination the following was the ocular condition: lids and conjunctivæ normal; cornea and anterior chambers clear; irides moderately dilated, not responsive to light; lenses clear; vitreous chambers clouded by minute opacities; the optic discs were pale, the arteries contracted; there was no optic neuritis; each retina was oedematous, showing a few greyish curved lines marking linear detachments of the retina from the choroid; vision was reduced to a perception of light. On examination of the nose the turbinals were found swollen, completely obstructing

the passages, with considerable secretion of muco-pus posteriorly. Upon contraction after the application of cocaine, pus was seen to be flowing freely from both the superior and middle meatus, right and left, and from the upper and back part of the left fossæ. Transillumination of the maxillary and frontal sinuses led to the diagnosis of acute purulent inflammation of the anterior and posterior ethmoidal cells on both sides and the left sphenoidal sinus. Atropin internally, and appropriate local treatment, relieved the inflammation, and the nasal condition was normal in about ten days; notwithstanding all treatment, however, and although the changes in the vitreous and retina disappeared, the vision remained seriously defective and showed little improvement. No symptoms other than those described, namely, pertaining to the eye and nasal cavities, were elicited, after the most careful scrutiny. The author therefore concludes that we must depend on the ocular and nasal examination to determine the source of the blindness.

St George Reid.

Kenny, A. L.—1. *Ulceration of the Tip of the Nose.* "Australasian Med. Gazette," April 20, 1896.

TUBERCULIN had been injected twice without effect; a third very strong injection caused intense general reaction, of the effects of which the patient complained for a month. The local reaction was slight, but the ulcer commenced to heal, and is now completely covered with skin. In the opinion of some members, the healing was not yet perfect. Emplast. salicylic acid and creosote (Unna) was used locally, but not until the reaction was established.

2. *Microscopic Specimens of a Naso-pharyngeal Sarcoma* removed from a young man, aged twenty. The growth commenced at the roof of the naso-pharynx, filled the whole cavity, causing complete nasal obstruction, and bled profusely on the slightest touch. An operation, as for post-nasal growths, was performed by the mouth, with cutting forceps and curettes, and zinc chloride was afterwards liberally applied. Some time previously another surgeon had removed a mass of sarcomatous glands from the left side of the neck, below the ear and behind the angle of the jaw. There is some recurrence in this part. The specimens were round-celled sarcoma.

Kent-Hughes, W.—*Case of Empyema of the Antrum.* "Australasian Med. Gazette," April 20, 1896.

A GIRL, aged twenty-two, for two years had had symptoms of antral disease, and three months previous to operation pus had discharged into the mouth after extraction of the second bicuspid. The facial wall of the cavity was chiselled through, and the pyogenic membrane thoroughly removed by scraping. The antrum was stuffed with gauze for ten days, the gauze being renewed daily, and the cavity was well irrigated with carbolic lotion (one in sixty). At the end of that period the wound was allowed to close.

A. B. Kelly.

Lichtwitz.—*Complications of Empyemas of the Accessory Cavities of the Nose.* "Ann. des Mal. de l'Oreille," Feb., 1896.

COMPLICATIONS may involve (I.) the neighbouring organs, nasal fossæ, pharynx, ears, eyes, or be cranio-facial; (II.) distant organs, the bronchial branches, digestive tube, etc.; (III.) the general condition, enfeeblement, loss of flesh, fever, etc.

I.

1. *Nasal Fossæ.*—The mucous membrane of the turbinateds may be atrophied, as in thirteen of the author's cases, and may simulate true ozæna. Three of his patients had been previously treated for ozæna, which he cured by treating the

sphenoidal sinus. Six others had employed nasal douches, and been cauterized; in these the nasal secretion diminished after the first irrigation of the sphenoidal sinus, and cephalalgia ceased entirely. In three other cases there seemed to be true ozœna with propagation to the sphenoidal sinus, and in the last case only maxillary sinusitis had been detected.

Hypertrophic rhinitis is frequently met with. In these cases the affection of the sinus appeared to resemble caseous coryza, the left maxillary sinuses being filled with thick fetid pus. There was also slight exophthalmos with left strabismus and diplopia and terrible cephalalgia. A malignant tumour of the superior maxilla was thought of; the patient, however, was cured by evacuation of the pus from the nose and antrum. Two other patients presented a similar condition of the frontal sinus and ethmoidal cells, but without orbital symptoms. In both the head symptoms were cured on removal of the pus. In twelve cases he found small polypi or granulations over the semilunar hiatus, and in eighteen cases large mucous polypi, filling both sides of the nose, along with unilateral sinusitis. The polypi were probably rather the cause than the consequence of the empyema. Kakosmia was present in a third of his cases.

2. *Naso-Pharyngeal Cavity and Oral Pharynx*.—Many of his patients, chiefly those with sphenoidal or frontal sinusitis, presented symptoms formerly described under the name of naso-pharyngeal catarrh, or Tornwaldt's disease. In many of his cases he has noted a complication of swelling and abscess of the palatine and pharyngeal tonsils.

3. *Eyes*.—He has only observed the following complications in these cases: dacryo-cystitis, three times, in two cases due to suppuration of several sinuses, and in one case to suppuration of the maxillary antrum; two cases of exophthalmos; and once he observed intense injection of the retinal veins in a patient who for twenty-four years had suffered from frontal sinusitis: they recovered their normal aspect when the empyema was cured. In two of his cases there was atrophy of the optic nerve, limited in one of his patients to a portion only of the retina: this patient had suppuration of the frontal sinus with irruption of the pus into the orbit. In the other case it was probably due to sphenoidal sinusitis. Once he noticed papillary inequality in a case of sphenoidal sinusitis.

4. *Ears*.—He has observed fifteen cases of old or recent suppurative otitis, once with mastoiditis; seven times sub-acute otitis; fourteen times chronic median otitis, with or without Eustachian obstruction; nine times nervous buzzings, and three times vertigo.

5. *Cranio-Facial Complications*.—The most frequent is cephalalgia, generally when the sinusitis is sphenoidal or frontal. Four times he has found facial neuralgia with maxillary sinusitis. In one of his cases irrigation of the right sphenoidal sinus caused epileptiform crises, with loss of consciousness.

6. *Cutaneous Affections of the Face*.—Five patients had recurrent erysipelas; he believes it to be a consequence and not a cause of sinusitis. Nasal eczema and acne rosacea have been observed by him in several cases. He has seen erythema and fugitive œdema after injection of antiseptic fluids.

II.

7. *Bronchial Complications*.—He has often seen acute or sub-acute laryngeal catarrh, twice with thickening of the cords, and many times with pareses of the glottic constrictors. Pseudo-phyma—this complication has not been sufficiently studied. In seven of his cases several distinguished confrères had diagnosed pulmonary tuberculosis; this, however, was only a temporary broncho-pneumonic process originating in empyema of the sinuses. We find congestion and sub-crepitant râles at the apex, or only roughness of the inspiratory murmur, which

sometimes dates from a long period antecedent; the symptoms appear and disappear frequently; there is no Koch's bacillus, and the lesion disappears after treatment of the sinusitis. The condition is probably caused by penetration of pus into the bronchi, specially during sleep. Sometimes rebellious bronchorrhœa follows. One of his patients had signs of a pulmonary abscess or lobular pleuritis. Three times he noted cough, disappearing only after evacuation of the sinus; five patients had symptoms resembling asthma.

8. *Elementary Symptoms*.—Four times he found dyspepsia, and three times rebellious diarrhœa alternating with constipation, and he believes these symptoms to be more frequent still.

9. *Vascular and Cardiac Affections*.—One of his patients, with empyema of all the sinuses, had a slow pulse, 28-30 to the minute, which became normal after treatment. In two patients with old maxillary sinusitis he found two attacks of phlebitis to have occurred. He thinks that in a case of aortic insufficiency sinus suppuration may have been the origin of an endocarditis, and that renal affections which he has met with, articular inflammations, and myalgias observed in some of his cases may have had this origin.

III.

General Affections.—He has noted general enfeeblement and loss of flesh ten times, fever four times, insomnia three times, unconquerable somnolence three times, aprosexia twice, cerebrasthenia several times, and pronounced melancholia four times. Crises resembling *petit mal* in a boy of ten were cured after removal of the pus from the sphenoidal sinuses.

Treatment.—He prefers opening into the maxillary sinus through the alveolar apophysis or canine fossa. For the frontal and sphenoidal sinuses irrigations through the natural orifices have always been sufficient for him, though he has often had to remove the middle turbinated, and enlarge the orifices. Wherever it is possible he prefers the endo-nasal treatment.

R. Norris Wolfenden.

Makuen, G. Hudson (Philadelphia).—*A Case of Stammering Cured by an Operation*. "Med. and Surg. Rep.," May 23, 1896.

ON examination of the case, defective tongue-action, an elongated uvula, and adenoid hypertrophy were found. When asked his name he was unable to tell it, although he made violent efforts to do so. The difficulty seemed to be at the base of the tongue, and even when no attempt was made at speech there were peculiar twitchings of the lingual and facial muscles. The diagnosis arrived at by the author was that of chorea of the facial, lingual, pharyngeal, and laryngeal muscles, chiefly due to adenoid hypertrophy, and in part to some deviation from the normal in the genio-hyo-glossus muscle. The child was put under ether, the frenum of the tongue divided well back, and the adenoids removed. Frequent lingual traction was afterwards made to keep the cut edges of the frenum from uniting. Vocal exercises were prescribed, and a cure quickly effected.

A. B. Kelly.

Milligan.—*Foreign Bodies in the Nose* (Three Illustrative Cases). "Med. Chron.," June, 1896.

IN two of these patients a boot button was the foreign body, in the other a rhinolith. The careful use of the probe, usually under an anæsthetic, is rightly insisted on. Angular forceps, snare, Volkmann's spoons, and bent probes are all useful for removal; also irrigation and the use of Politzer's bag up the unaffected nostril may dislodge the foreign substance. Both are, however, distinctly dangerous, especially the former, unless the dislodgement takes place at once, owing to the risk of setting up middle-ear mischief.

Barclay J. Baron.

Sattler, Eric E. (Cincinnati).—*Atrophic Rhinitis, with a New Idea as to its Causation and Treatment.* "Clin. Chron.," May, 1896.

THE following are the author's conclusions:—(1) Atrophic rhinitis is a genuine, distinct disease of the nose. (2) It is never a sequel or later stage of true hypertrophic rhinitis. (3) It is not caused by syphilis, tuberculosis, or scrofulosis. (4) It is a disease of the female sex. (5) It is caused by a true degenerative process of the trophic fibres or roots which supply the parts of the nasal membrane involved. It is, therefore, essentially and primarily a nerve disease. (6) Being primarily, then, a degenerative process of the nerve fibres or centres, it is never completely curable. It may be arrested, perhaps, and sometimes is, at some stage of the process. (7) Its treatment is symptomatic—local and constitutional. Local treatment consists in a thorough systematic cleanliness of the parts involved; personal attention to the removal of all crusts; restoration of the function of the membrane as far as possible; and prevention of the consequences of the nasal trouble in the naso-pharynx, pharynx, larynx, and trachea. Constitutional treatment consists of remedies directly in accord with the theory of nerve degeneration advanced, as well as general building up of the system and the stamping out of any dyscrasia that may be associated with, but is not the cause of, the disease. (8) The disease should be termed "trophic rhinitis" rather than "atrophic rhinitis," the atrophic condition being only a symptom.

A. B. Kelly.

Sattler, Eric E. (Cincinnati).—*Interesting and Instructive Cases.* "Clin. Chron.," May, 1896.

A Button in the Right Nostril for Four and a Half Years.—A girl, aged seven, was brought to the author on account of an occasional bad odour and discharge from the right nasal cavity, and headaches over the right half of the head. About five years previously she had pushed a button into her right nostril. Attempts made to remove it, immediately afterwards, failed. The author found the button wedged between the inferior turbinate and septum, and withdrew it easily. It measured over five-eighths of an inch in diameter. It was covered with mucus, but no concretion had formed around it.

Congenital Osseous Occlusion of the Right Posterior Naris.—A lady, aged twenty-four years, consulted the author in regard to a constant profuse mucous discharge from the right side of the nose, which she was unable to expel. She had never breathed through the right nasal cavity. Examination of this cavity revealed great hypertrophy of the inferior turbinate, and, on passing a probe backwards, a solid wall of hard, bony tissue was encountered everywhere. It seemed perfectly smooth, and sprang from the vomer, one and a half to one and three-quarters of an inch from the vestibule. The septum was perfectly straight. By posterior rhinoscopy this unilateral wall of tissue was seen very plainly. Its thickness was estimated at about one-twelfth of an inch. Operation was confined to the cauterization of the inferior turbinate, which effected a diminution in the amount of secretion.

Congenital Osseous Occlusion of the Left Posterior Naris.—This was the case of a lady, aged about thirty years, who had never breathed through the left side of her nose, and had been constantly annoyed by a muco-purulent discharge from this side. The septum was greatly deflected to the left, so that it was impossible to see beyond the deviation. With a probe the posterior part of the nose was thoroughly examined, and a hard, thick obstruction found everywhere. Posterior rhinoscopy revealed a complete closure of the left posterior naris, and a thick ridge of bony structure extending from the lower part some distance into the naso-pharynx, on a level with the floor of the nose. The large anterior deviation of the septum was

first sawed off. A very large, hard, middle turbinate was then found to obstruct a great part of the passage. This was removed, and finally the posterior osseous walls perforated and kept open. The case is still under treatment.

Congenital Web of Larynx.—The patient was a boy, aged thirteen years. His parents had noticed that from birth he had neither cried nor made any sound. Distortion of his face alone showed them when anything was wrong. As he grew up he began to talk in a whisper. When seen by the author he still spoke in a whisper, and if he ran he became short of breath; otherwise his physical condition was good. The laryngoscope showed a web between the cords in front of the vocal processes. It appeared dense and fibrous, and the opening that remained could only have allowed the passage of an ordinary lead pencil. Operation was strenuously urged, but refused by the parents. *A. B. Kelly.*

Seiler, Carl (Philadelphia).—*The Importance of Specific Gravity of Liquids for Topical Medication.* "Med. and Surg. Rep.," May 23, 1896.

THE author calls attention to the importance of having washes, douches, dressings, etc., of a density equal to that of the serum of the blood, so that there may be no interchange by osmosis between the cells or blood-vessels of the tissues and the topical application. In the nose, if the fluid used is of less density, the venous sinuses will become surcharged, thereby causing swelling and pressure upon the nerve filaments, and, consequently, in the first instance pain, and as a secondary effect congestion, owing partly to the irritation of the nerves, and partly to the engorgement of the capillaries, so that the object of the wash or douche is defeated. If, on the other hand, the liquid used is of a greater specific gravity than it should be, the watery elements will ooze out of the tissues by exosmotic action, and shrivelling will take place together with an abnormal accumulation of the solid elements, and again pain as well as congestion will be the result.

The author advises that a concentrated solution be prepared by the druggist, and the patient be directed to add a sufficient amount of this to the exact quantity of water. In this way a perfect solution, and one of the proper specific gravity, is obtained.

In most instances neutral unirritating sodium chloride is the best agent with which to obtain the proper specific gravity—by using fifty-six grains of the salt to a pint of water, to which the other ingredients may be added as desired. If, however, alkalies are indicated in a wash, it is best to make the alkaline solution first of the suitable strength, and then to bring it up to the required standard of density by the subsequent addition of sodium chloride. *A. B. Kelly.*

MOUTH, PHARYNX, &C.

Armstrong.—*Carcinoma of the Tonsil.* "Montreal Med. Journ.," June, 1896.

THE case of a man of fifty-nine, a heavy smoker, who began to notice pain on swallowing two months previous to admission.

Very little increase in the size of the growth had been noticed since its first appearance. The tumour was the size of a marble, and grew from the right tonsil. It was hard and gristly, neither tender nor painful, and freely movable in all directions, and had the microscopic structure of epithelioma. Two enlarged glands were detected in the neck, and the anterior pillars were infiltrated. After preliminary tracheotomy the tonsil was removed by a modification of Cheever's

operation. The external carotid was tied below the origin of the facial artery and little hæmorrhage occurred.

The posterior belly of the digastric, the stylohyoid and styloglossus were turned aside and not divided, while the superior constrictor was opened and the tonsil thoroughly separated. The anterior pillar and a portion of the base of the tongue were removed, together with the tonsil, through the mouth.

Good recovery was made, but the prognosis is not considered good.

Ernest Waggett.

Evans, T. C. (Louisville, Ky.).—*Chancre of the Tonsil and Tongue, with Report of Four Cases.* "Med. News," May 9, 1896.

THE author believes that the difficulties of an early diagnosis of primary syphilis of the mouth and tonsils have been over-estimated. He goes on to say that, considering all ulcerative lesions of the mucous membrane of the mouth and pharynx are almost certainly malignant, tubercular, or syphilitic, we can arrive at a diagnosis by exclusion. Three of the cases reported presented a sharply-defined ulcer of the tonsil, surrounded by indurated tissue, and covered by a greyish-white slough; the tonsils were enlarged, and the palate and uvula congested; the cervical glands enlarged and tender.

In the fourth case the apices of both tonsils were covered by a symmetrical pseudo-membranous mucous patch, following an ulcer at the end of the tongue three months previously. All the cases were followed by typical syphilitic eruptions.

The author believes that the crypts of the tonsil form a most excellent nidus for the protection and growth of the syphilitic virus, and concludes by pointing out that the failure on the part of the physician to recognize that syphilis may be contracted in other ways than by improper sexual relations has led many cases to escape being recognized.

StGeorge Reid.

Kayser, Rich (Breslau).—*On the so-called Pharyngo-Therapy.* "Therapeut. Monats.," May, 1896.

UNDER the name "pharyngo-therapy" Heller, of Nürnberg, and Ziem, of Danzig, have described a method of treating nearly all the infectious diseases. The ideas underlying their method are, shortly, as follow:—(1) Most disease-producing germs enter the body in the inspired air. (2) Owing to the peculiar structure of the respiratory tract they are almost all caught and retained in the first part of this tract—viz., the nose, mouth, pharynx, larynx, and trachea; indeed, few pass beyond the nose (or mouth) and pharynx. (3) Therefore, in order to prevent or to treat an infectious disease, it is simply necessary to wash all the germs out of these cavities.

For long it has been admitted that the germs of certain diseases—the so-called miasmatic diseases—exist in the air. To them are to be reckoned probably measles, scarlatina, small-pox; then pneumonia, influenza, whooping-cough; also malaria and cerebro-spinal meningitis, and perhaps acute rheumatism. In diphtheria and tuberculosis ærial is the principal but by no means the only method of infection. In enteric it is only of secondary importance, and in cholera, dysentery, and puerperal fever it is excluded.

The filtration apparatus of the nose, etc., while sufficient for most ordinary purposes, is by no means perfect—witness the various pulmonary diseases from inhalation of dust. Tubercle bacilli, pneumococci, and diphtheria bacilli have been found in the noses of healthy people. If this proves anything, is it not that they are harmless there, and that only the few odd germs that have penetrated further in produce the disease? Lermoyez and Wurtz have shown that nasal mucus possesses germicidal properties; probably also the pharyngeal ring of adenoid tissue acts similarly by phagocytosis.

Measles is the only infectious disease that regularly commences with symptoms referable to nose and pharynx. The first symptoms of scarlatina and diphtheria are usually in the mouth; while in malaria, typhus, pneumonia, etc., the initial symptoms only seldom are in the nose or throat, and tuberculosis beginning there is extremely rare.

All this shows that, while there is a possibility that infectious diseases may begin in the nose and throat, it is a possibility only, not a probability. Now, granted that it were worth while clearing all these micro-organisms out of the nasal and pharyngeal cavities, the question arises, "Can this be done?" Certainly not by any form of syringe or douche. Litres of water may be poured through a nose with *ozæna*, but not clean it thoroughly, and every rhinologist knows the difficulty of removing pus out of a nose so as to make it appear clean even to the naked eye.

Again, suppose it were possible to thoroughly clean all micro-organisms out of the nose, how often ought this to be done? As soon as the washing is finished more micro-organisms are in the air ready to enter, unless a respirator is to be worn all the time. No surgeon believes that by washing his hands three or four times a day he thereby renders them aseptic for the rest of that day.

Further, it must be borne in mind that copious douching of the nose is not without its own dangers, especially the danger of driving infectious material into accessory cavities or into the Eustachian tube, or out of the nose into throat, stomach, etc.

In conclusion, Kayser admits that *symptomatic* treatment of the nose is to be commended in infectious (as in other) diseases, but denies that "pharyngo-therapy" is at all supported either by experience or by theory.

Arthur J. Hutchison.

Кнох, D. N.—*Actinomycosis of the Cheek and Neck.* "Glasgow Med. Journ.," May, 1896.

THE patient, a young married woman, had been a farm servant up till the date of her marriage, and since then had frequently worked on a farm—milking, etc.

The disease first appeared as a slight swelling inside the left cheek, opposite the first molar. This was incised twice—once from inside the mouth and once from outside—and poulticed at intervals for five months, till the date of her admission to the Glasgow Royal Infirmary.

On admission, there was a large, rounded, firm swelling, about four inches in diameter, infiltrating the substance of the left cheek, extending downwards over the base of the jaw towards the chin and backwards to the lobe of the ear. The skin over it was a dark purple hue. There were no external openings, but numerous small tubercles all over the surface. The mass seemed firmly adherent to the lower jaw. The general health was good. Temperature, 98·2 morning and 99·8 evening. At first it was considered either malignant or syphilitic. A piece removed seemed to confirm the diagnosis of syphilis. Later on, the possibility of actinomycosis was considered; but repeated searches in tissue scraped away failed to reveal the actinomyces, till an abscess formed and the organism was found in the pus.

Treatment was by repeated scraping with the sharp spoon, and, internally, iodine in potassium iodide, or large doses of the latter. In spite of this, however, the disease steadily progressed, and the patient died from exhaustion nine and a half months from the onset of her illness.

The changes that took place in the skin after each scraping were interesting: the red colour for the most part disappeared, and the skin became yellowish and leathery; the cavities and openings made by the spoon healed, and the surface became very irregular and tuberculated. This change was obviously of the nature

of a healing process; and there was, therefore, always a hope that the tendency to spread deeper into the neck might be checked thereby.

Arthur J. Hutchison.

Richey, S. O. (Washington).—*The Fads and Fashions of Surgery*. "Annals of Oph. and Otol.," April, 1896.

IN this paper the routine use of many operations is condemned. Most of these are operations which, a few years ago, were either unknown or only rarely performed, but which lately "have come into fashion."

Tonsillotomy is necessary in emergency, but should not be a routine practice; it removes redundant tissue, but leaves untouched the disease that will soon reproduce it. The cause of tonsillar hypertrophy is probably constitutional—abnormal digestive and metabolic processes, which will surely not be cured by removal of proliferated tissue. "Applications to the surface of the gland serve no purpose whatever, but by the use of proper agents in the crypts, injected gently or passed through the orifices on a cotton holder, the organ will gradually shrink, until the age of atrophy." The agents recommended are silver nitrate, to promote constructive metamorphosis; kali permanganate, to excite active oxidation; salicylic acid, to neutralize morbid and irritating deposits.

Excision and cautery of the hypertrophied turbinated bodies occurs more frequently than is justified.

The hypertrophy is often the first stage of an atrophy; the operation must, therefore, accentuate the final condition, and adds a cicatrix which collects the secretions and causes increased and never-ending annoyance. A consideration of the anatomy and physiology of the nose shows that what is required is to reduce the calibre of the arteries in the "upper straight," thereby diminishing the influx of blood, removing their pressure on the sinuses, and thus permitting efflux of blood. This is to be done by applying, very gently, a four per cent. solution of cocaine to the upper meatus, to be followed by a two to ten per cent. solution of silver nitrate. The middle and lower meatus may be left alone, as their function is only drainage, and they soon come right of themselves.

Removal of adenoids is open to similar criticism. Often, if left alone, they do no harm and ultimately come right of themselves. Operation does not remove their cause, but may give rise to immediate severe ear disease, and leave the nasopharynx to become, not only far too large after the age of puberty, but covered with hard nodules, which collect secretion and cause constant irritation, or even ulceration.

Excision of the drum-membrane with the malleus and incus is justified by a suppurative process whose focus cannot be more simply reached, but for sclerotic catarrh it is to be condemned. It does not help at all to retard the disease; on the other hand, it removes from the delicate structures of the middle ear their natural covering and protection. Richey places his reliance "almost entirely upon vapour of iodine, with good, though not uniformly satisfactory, results." This rest of this paper is devoted to similar criticism of various operations on the eye.

Arthur J. Hutchison.

Texier.—*New Method of Administration of Bromide of Ethyl in Oto-Rhinology*. "Ann. des Mal. de l'Oreille," March, 1896.

IN order to avoid accidents we ought to attempt to obtain true anaesthesia as it is generally understood, but the transitory stage which precedes it produces paralysis of the cerebral hemisphere only. With chloroform there is only a short interval, but with bromide of ethyl this is prolonged. The same precautions as in general anaesthesia ought to be observed—the patient ought to be at once put into the position for operation, the best being situated on the knees of an assistant,

who places the limbs between his own, fixes the head with the right hand, and holds the hands with the left. The drug should be administered on a flannel mask. Five grammes of freshly-prepared bromide of ethyl are necessary for a child from three to eight, and five to ten grammes for children up to fifteen years of age. This dose ought not to be surpassed. This method is also characterized by an absence of the transition stage of coming out of the anæsthesia. As soon as the operation is over the child can expectorate himself without having to be told, and there are no after-symptoms. Lermoyez has pointed out that the time to cease the inhalation is when the pupils commence to dilate and the conjunctivæ are slightly injected. It is quite innocuous, and is suitable up to sixteen years of age ; after which it is not a good anæsthetic, sleep being very difficult to obtain, and accompanied with a phase of excitation which often lasts for hours. It is only suitable for short operations, lasting thirty to sixty minutes, such as adenoids or large tonsils, aural polypi, and paracentesis of the tympanum. The cases in which it is absolutely contra-indicated are tubercular and congestive affections of the lungs, congenital and valvular affections of the heart, renal subjects, and to a less degree certain nervous conditions, taciturn subjects, depression, and children having fear of operation. Beyond these there is absolutely no contra-indication.

R. Norris Wolfenden.

LARYNX.

Billot.—*Analysis of Cases in which Tracheotomy Canulas have fallen into the Air Passages.* "Ann. des Mal. de l'Oreille," March, 1896.

THE author has collected nineteen cases which have occurred during twenty-six years, only one being in France, the others Russian, English, and American, which he explains by the assumption that the canulas in France are of more solid metal and more careful construction than elsewhere. A broken canula appears to fall generally into the right bronchus, like other foreign bodies. (Seven times in the right as against four in the left in the author's statistics.) The bronchi and trachea seem to have retained without excessive reaction tracheotomy canulas for times varying between one day and three years and three months. In cases of prolonged sojourn of the canula in the bronchi it is necessary in order to obtain free respiration that the canula should lie in the bronchus in a manner so as not to obstruct it, which seems to be the ordinary condition, and that there should be no other obstacle—small tracheal opening, vegetations, etc., which double the danger. If attempts at immediate extraction do not succeed, it is a capital point for the surgeon to examine how the patient breathes. If freely, he may temporize ; if with difficulty, the tracheal opening should be enlarged and dilated, the simplest method being to introduce immediately a new and large canula.

In Razumowski's case the patient lived for three years with a canula in the bronchus and another in the neck. The author lost one case, which he attributes to the neglect of putting in a new canula. He does not agree with Sands' suggestion to seek the foreign body with the finger. A small probe, forceps, or metallic thread will give all the information possible. As to the choice of instruments, forceps and metal loops have given good results. A surgeon should have various different models at hand. He does not regard the suggestion of bronchotomy with favour, the canulas not descending lower than the first bronchial division, and it is also quite rare that attempts at extraction with forceps and wire loops have not eventually succeeded.

R. Norris Wolfenden.

Erselberg (Königsberg-in-Pr.).—*Resection and Suture of the Trachea.* "Deutsche Med. Woch.," No. 22, 1896.

THE patient, aged thirty-six, had cut his throat in an attempt at suicide nine months before; the trachea, which was divided, was united by sutures; these sutures had to be removed and a tracheotomy tube inserted on account of attacks of dyspnoea. It was found by the author that the tube could not be removed without inducing severe attacks of dyspnoea. The cause of this proved to be an obliteration of the lumen of the tube. The obliterated portion was resected, two centimètres of the trachea being removed, and the cut ends united by suture; the canula was removed four days later, and within a short time the patient quitted the hospital breathing and phonating normally. The author, whilst recommending resection, does not consider that the necessity for it should occur if proper primary or immediate treatment is adopted.

Michael.

Hamilton, T. K. (Adelaide).—*Removal of a Foreign Body from the Bronchus.* "Australasian Med. Gazette," April 20, 1896.

A CHILD, aged about five years, commencing to cry while she had a bean (one of the seeds from the cone of the stone-pine) in her mouth, drew it down into the larynx. She was seen by a doctor almost immediately afterwards, but he could find nothing in the throat. If she cried the breathing became stridulous with much dyspnoea, and air did not enter the right lung at all freely.

When seen by the author two days later she was restless, there were occasional paroxysms of cough, the breathing was regular, and there was no stridor. A laryngoscopic examination under an anæsthetic failed to reveal anything of importance. On examining the chest, there was found to be complete absence of breath sounds over the right lung. Two days later, a low tracheotomy was performed, and a suture inserted in each side of the incision, through the trachea, to make the wound gape and keep it open. The child was then inverted, and the foreign body was coughed out through the opening. A rapid and uninterrupted recovery was afterwards made.

A. B. Kelly.

Heryng, Theodor (Warsaw).—*On Sulpho-Ricinate of Phenol, and its use in Tubercular and Chronic Diseases of Pharynx, Larynx, and Nose.* "Therapeut. Monats.," Mar. and May, 1896.

IN the first of these papers Dr. Heryng gives a detailed account of the history of the discovery of sulpho-ricinic acid, one of the solvins; of the method of its preparation, of its properties, and of its introduction by Ruault into the realm of therapeutics. This is largely taken from Ruault's book, "*Le Phénol Sulfuriciné dans la Tuberculose Laryngée.*" The second paper is devoted to the use of the drug in tuberculosis of the upper air passages, specially of the larynx. And a third paper is promised which is to deal with the application of the drug to chronic diseases of the upper air passages, viz., chronic hypertrophic coryza, rhinoscleroma, papilloma of the larynx, and syphilitic affections of the pharynx.

First Paper.—According to Kobert the "solvins," among which sulpho-ricinic acid is classed, are the products of the action of concentrated sulphuric acid on triglycerides of the fatty acids or on the fatty acids themselves. There must therefore be a solvin corresponding to every oil, fat, and fatty acid. According to Benedict and Ulzer, concentrated sulphuric acid acting, in ice-cooled vessels, on fats produces the acid sulphuric ether corresponding to the fatty acid acted on, and the solvins are their neutral salts (mostly of ammonia). The solvins are thick, syrupy, bright yellow to brown fluids, decomposed at 95° to 110° C., and forming a vaseline-like mass at 0° C.

The most striking property of the solvins is their power of dissolving, or at least emulsifying, very many substances that are quite insoluble in water; for example, sulpho-ricinic acid dissolves forty to fifty per cent. phenol, ten per cent. β naphthol, fifteen per cent. salol or salicylic acid, etc., etc., and the solutions do not alter even after long standing. The phenol-sulpho-ricinate (for therapeutic use) must be quite clear, without the least turbidity, and must remain so at a temperature of 15° C. All preparations that are not quite transparent, dark brown, or that form a precipitate, must be thrown out as impure. They contain water, and, therefore, cause pain when applied to the mucous membrane. According to Müller-Jacobs, solvins penetrate animal and vegetable membranes with great ease; but Kobert and Kiwult have shown that that is true only of dead membranes.

To describe the method of preparation of sulpho-ricinic acid would be out of place here; the reader is, therefore, referred to the original article, or to Berlioz—"De l'Acide Sulfo-Ricinique," etc. (*"Archiv. de Laryng."* 1889, p. 6).

Experiments on animals show, says Ruault, that sulpho-ricinic acid dare not be used internally or subcutaneously. On the other hand, it may be fearlessly applied to the mucous membrane of the nose, throat, and larynx.

Experiments on rabbits and guinea-pigs, introducing sulpho-ricinic acid into stomach, into pleural and peritoneal cavities, into subcutaneous tissue, and into crural vein, demonstrated the poisonous action of the drug. The animals rapidly died in convulsions. Microscopic examination showed destruction of the red blood corpuscles. The coefficient of toxicity was estimated by Berlioz at two hundred and twenty-seven milligrammes to one kilogramme weight of animal.

A forty per cent. phenol-sulpho-ricinate has no caustic action on the mucous membranes. It causes a slight burning sensation on the tongue and pharynx; indeed some people say it is painful, and this sensation may last, in very sensitive patients, for hours. This is more particularly the case when the part touched is the posterior wall of the larynx, that being the most moist part of the larynx; it must also be remembered that, normally, the pars arytenoidea is the most sensitive part of the larynx. Pharynx and tonsils react but slightly on painting with the phenol solution, and even in the nose a thirty per cent. solution causes only slight pain. It should be borne in mind, however, that there are exceptions, and, therefore, that it is wise to begin with a ten or twenty per cent. preparation, and in tuberculous patients even to use cocaine before the first application of the phenol.

Heryng has no unpleasant (toxic) effects to report. As to the unpleasant taste, while some recommend the addition of menthol and saccharin, others prefer to use the drug pure, letting the patients gradually get accustomed to it.

Second Paper.—This paper commences with a warning to all who may have to undertake local treatment of laryngeal conditions that not only skill, but great patience and the power of gaining the patient's confidence, are required. Further, that general as well as local treatment must be conscientiously carried out. Then the method of preparing cotton-wool laryngeal swabs of different shapes to suit different parts of the larynx are described, and the dangers of unskilled working in the larynx emphasized.

Phenol-sulpho-ricinate painted on to the mucous membrane of the mouth and pharynx produces a slight reddening. In the larynx this is more marked, but is only of short duration, and is soon followed by paleness of the surface. Where the mucosa is already hyperæmic the reaction is naturally more marked and lasts longer (according to Ruault, even twenty-four to forty-eight hours). Hence the rule—the stronger the reaction after painting with phenol (or, in the same way, the greater the pain) the less frequent must be the applications. Thus, some patients

can stand the application twice daily; others not more than twice weekly; while there are a few who cannot stand it at all. After being painted the mucosa takes on a whitish colour, which generally lasts about twenty-four hours. The sputa expectorated immediately after an application are tough, creamy, opaque, and white.

Ruault's directions for the use of phenol-sulpho-ricinate are as follows:—For tubercular erosion of the vocal cords and posterior laryngeal wall, gentle painting twice a week, or in more tolerant cases every second day, is sufficient. For the initial stage of circumscribed tubercular infiltration of the epiglottis or vocal cords, first scarify freely; then, after bleeding has stopped, rub in the phenol with some force. If the infiltration is accompanied by ulceration and granulations, the latter are first to be removed with the curette. For the diffuse infiltrated form combined with ulceration, energetic rubbing with phenol is contra-indicated. Gentle painting is sufficient, or, if that has no effect, surgical treatment is called for. Tuberculosis of the epiglottis in its initial stage stands pretty energetic treatment with phenol. In widespread, rapidly breaking down deep ulcers, and only in this condition, Ruault finds an indication for surgical treatment of the epiglottis; but on this point Heryng differs from him.

The sclerotic, hyperplastic, and pachydermic forms must first undergo surgical treatment. Lastly, in military tuberculosis the prognosis is so hopeless that any treatment that increases pain or irritates the tissues must be completely laid aside.

Results.—Superficial tubercular ulcers, which are usually covered with greyish white matter, rapidly become clean, their edges fill out, and little red granulations sprout up all over. The purulent secretion becomes more mucous, less in quantity, and gradually disappears. Deep inflammatory ulcers with irregular edges become rapidly pale, and the swelling and granulations disappear in an astonishingly short time. Infiltrations and papillomatous growths rapidly diminish. Infiltrations and ulcerations of the ventricular bands often withstand all treatment, because they are part of the same affections of the ventricles. Here surgical treatment must prepare the way for treatment by phenol.

A peculiarity of the phenol treatment is that no cicatrices are to be seen on the surfaces after healing.

The so-called catarrhal form of laryngeal tuberculosis is the most rapidly healed (Ruault); next come circumscribed periglottic infiltrations or ulcerations. The prognosis is distinctly worse whenever the epiglottis or the crico-arytenoid articulation is affected. A good prognosis may be given in cases of tubercular tumours, hypertrophic or papillomatous growths that have first been treated surgically. Other points affecting prognosis are heredity, constitution, age of patient, social position, and the condition of the alimentary tract. Treatment in hospital seems to Heryng unsatisfactory.

Of the mode of action Heryng offers no definite explanation.

This paper ends with an emphatic statement of the advantage, or rather necessity, of using only the Paris preparation of phenol-sulpho-ricinate, as in Heryng's experience other preparations had little therapeutic effect and caused severe pain.

A third paper, giving a more detailed account of Heryng's personal experiences with this drug in laryngeal tuberculosis, and its application to certain chronic diseases (*vide supra*), is to follow.

Arthur J. Hutchison.

Krebs, G. (Hildesheim).—*The Treatment of Chronic Catarrh of the Pharynx and Larynx.* "Therapeutische Monatshefte," June, 1896.

GREAT advances have recently been made in the treatment of these diseases, so that now, instead of being considered incurable, as was the case not long ago,

"the great majority can be cured." Each case must be treated on its own merits, the underlying cause or causes sought out, the stage the disease has reached and the anatomical changes it has produced carefully considered—the treatment varying accordingly. For example, in chlorotic patients with pharyngeal catarrh, treat first the chlorosis, omitting all local treatment till it is clear that the curing of the chlorosis has not also cured the throat condition. The same rule applies to primary scrofulous catarrh, except that in these cases the disease is seldom a catarrh of the pharynx and larynx, but rather a scrofulous rhinitis, or is due to the presence of adenoid vegetations. Again, patients with hæmorrhoids or plethora abdominals (Rhiile) often suffer from chronic throat catarrhs. They must be treated at Karlsbad, Marienbad, Kissingen, etc., etc., before any local treatment is tried. Syphilitic catarrh of the throat does not exist, though syphilis of the throat (gummatous infiltrations) certainly does. In a syphilitic patient catarrh of the throat is a chance complication, but is a simple catarrh, although most textbooks still describe syphilitic catarrh of the throat. The same remark applies to the pharyngitis sicca et albuminuria of diabetics and sufferers from Bright's disease. The dryness of the pharynx is not an isolated local condition, but is merely the result of the general want of water throughout the system. The author by no means wishes to deny that a true catarrh may occur in diabetes or Bright's disease. When it does occur it must be treated.

A second and more important (because more common) group of causes of chronic pharyngeal and laryngeal catarrh is constantly repeated mechanical and chemical irritation, the chief factors being alcohol, tobacco, and dust. Patients may be allowed moderate quantities of beer and light wines; one or two cigars a day. Cigarettes and chewing to be strictly forbidden. To prevent inhalation of dust, teach the patient to breathe through the nose, because scarcely anyone will take the trouble to wear a respirator constantly. Further, let them live as much in fresh air, especially forest-air, as possible.

The troubles arising from over-strain of the muscles, etc., of the throat are well known. Moderation in the use of the voice must be advised, correct methods of voice production taught, and the bad habit of coughing and hawking put down.

Of all etiological factors of chronic throat catarrhs the most important is disease of the nose. About fifty per cent. of these cases should be treated through the nose. The nose disease affects the throat in three ways:—

1. Stoppage of the nose removes the natural filter and moistener of air.
2. Secretions from the nose and its accessory cavities, when copious, flow naturally into the pharynx. When smaller in quantity they are drawn into the pharynx and partly swallowed, but partly they remain adhering to the pharyngeal and laryngeal walls. This, in the author's opinion, accounts for laryngitis and pharyngitis sicca vel atrophica and muco-purulenta, and at the same time indicates the correct treatment of these diseases. The same is true of naso-pharyngeal catarrh.
3. Direct mechanical disturbances are produced when the posterior parts of the nose are diseased.

Lastly, diseases of the lungs, etc., may also produce throat catarrhs. Thus, in three hundred and ten lung patients Schäffer found the larynx affected in three hundred and two.

Internal medication of idiopathic throat catarrh is of little use. Various spas are recommended by different doctors. Alkaline and alkaline-chloride springs, such as Ems, Vichy, etc., are the most generally recommended. Schmidt prefers the cold waters of Kissingen, Homburg, etc. All these waters, or pastilles prepared from them, lessen the tough mucus in the throat and so lessen the irritation. Again, sulphur waters are recommended, such as Weilbach or Neundorf;

whilst high-lying forest lands, Alpine valleys, and sea air all have their uses and advantages. For dryness Jurasz recommends iodide of potassium, and, when paræsthesia is marked, bromides, valerian, arsenic, and the like are indicated.

The author then insists that far too little attention is paid to the psychical element in throat cases, and, consequently, in their treatment. That man will be most successful in treating chronic throat cases who, while employing correct treatment, can gain his patient's confidence in himself and his methods—who, in short, employs intentionally or unintentionally a certain amount of "suggestion."

(To be continued.)

Arthur J. Hutchison.

Manley, T. H. (New York).—*Cancer of the Larynx*. "Medical Times and Register," May 9, 1896.

REFERRING to a case of laryngeal ulceration, supposed to be malignant, where the larynx and three rings of the trachea had been removed, the patient dying three hours afterwards, the author sums up against such operative procedure in these cases, believing that it is generally fatal, gives little relief, and no certainty of eradicating the disease. On the other hand, he points out the great success of the operation of tracheotomy in relieving pain and prolonging life, which, combined with palliative treatment, he considers the only rational procedure.

StGeorge Reid.

E A R.

Bezold, F. (Munich).—*The Hearing Power in Cases of Bilateral Atresia of the Auditory Canal with Rudimentary Auricle*. "Arch. of Otol.," Vol. XXV., No. 2.

IN two cases examined by the writer there was diminished air conduction for low tones, marked "negative" Rinne, and increase of bone conduction for all forks. These results coincide with those obtained by others, and from the point of view of functional testing localize the defect as in the conducting apparatus, and more suggestive of ankylosis of the stapes than of simple meatal obstruction. This is confirmed by the results of thirteen autopsies collated by Joel and three by Ranke.

Dundas Grant.

Bonnier.—*Variation of the Patellar Reflex in Certain Labyrinthine Affections*. "Semaine Med.," No. 3, Jan., 1896.

THE author notes an augmentation of the knee reflex in a large number of patients affected with marked labyrinthine insufficiency. He has seen diminution and even suppression in cases of auricular inflammation. The mode of appearance of these reflexes suggests that this direct action is in reality only the marked variation of an interference of a dynamogenic character.

Lacoarret (Waggett).

Burnett, C. A. (Philadelphia).—*Chronic Tympanic Vertigo*. "Philad. Polycl.," May 2, 1896.

THE author believes that paroxysmal chronic tympanic vertigo is a late symptom of chronic catarrhal middle ear disease, being preceded by tinnitus and increasing deafness, and accompanied by failing health, leading to the true cause of the disease often being overlooked, and, when diagnosed, to be mistaken for internal ear rather than middle ear mischief. He reminds us of the symptoms present in epilepsy and cerebellar disease, not found in this; he points out that the chronic catarrh of the tympanum leads to a sclerotic change in the mucous membrane,

a retraction of the membrana tympani and the chain of ossicles, with impaction of the stapes in the fenestra ovalis; further, that the membrane of the fenestra rotunda being also thickened by the catarrhal process, and more or less immovable, the column of labyrinthine fluid is compressed and causes vertigo by irritation of the terminal fibres of the auditory nerves. He believes that the paroxysmal character of the vertigo is caused by variations in the degree of impaction of the stapes, due to changes in the atmosphere, catarrh of the naso-pharynx, failing health, etc. The author advises removal of the incus as the only efficient method of relieving the impaction of the stapes.

StGeorge Reid.

Courtade.—*Mastoiditis, with Sero-Mucous Effusion; Evacuation by Compression in the Air of the Auditory Meatus.* "Ann. des Mal. de l'Oreille," Feb., 1896.

THE author relates two cases in detail, from which he draws the following conclusions. In certain acute suppurative median otitis the mastoid apophysis participates in the inflammatory process and is filled with sero-mucous liquid. This mastoiditis with effusion does not give rise to any general or local symptoms as marked as suppurative mastoiditis. Evacuation of the liquid may be successfully obtained in certain cases by simple compression of the air in the auditory meatus with Siegel's speculum.

R. Norris Wolfenden.

Coyne, Cannien.—*The Histology of the Organ of Corti.* "Journ. d'Anat. et Phys.," May, June, 1895.

THE membrane of Corti consists of three portions: internal, middle, and external. It is made up of three superposed layers, which may be clearly made out in radial sections. The inferior and superior layers are narrow and dense. The middle layer is thicker and clear, and is traversed by fibrillæ. In a section cut perpendicularly to these fibrillæ, a reticulum forming polygonal spaces is made out. The partitions join at the angles of the network, and are thickened throughout the whole length of the line of junction.

The hairs and cellules of the organ of Corti are continued in the spaces. The membrane has two insertions; (1) internal, on the protuberance of Huschke; (2) external.

It is morphologically comparable to the cupula terminalis. The reticular membrane is considered by the authors to be the inferior layer of the membrana tectoria.

Lacoarret (Waggett).

Danziger, Fritz (Beuthen, O.S.).—*On the Treatment and Causes of Unilateral Chronic Ear Catarrh.* "Therapeut. Monats.," June, 1896.

THIS paper deals with suppurative otitis media arising in connection with disease of the nose or naso-pharynx. Several cases are quoted in which obstinate otorrhœas that had resisted other treatment were easily cured, either by treating the nose or naso-pharynx alone, or by that combined with some simple treatment of the ear. The author concludes as follows:—(1) The otorrhœa is mostly unilateral because the nose or naso-pharynx is seldom affected equally on both sides. (2) The disease varies in intensity with every alteration in the region of the upper respiratory tract (colds, etc.). (3) Caries or widespread destruction of the petrous bone has never been observed by the author. (4) Hearing power is not so much affected as in otorrhœas from other causes—provided it is not left for years without suitable treatment. The prognosis is better than in almost any other ear disease, because, the throat and nose having been treated, the ear gets well almost of itself.

Arthur J. Hutchison.

Dench, E. B.—*Neoplasms of the Ear.* New York Eye and Ear Infirmary Report, January, 1896.

THE author gives full details of several cases of new growth in and about the ear which have come under his observation during the past twelve months. They are five in all. (1) Sarcoma above the tragus. (2) Large exostosis. (3) Ulcerating papilloma. (4) Fibro-sarcoma of the middle ear. (5) Round-celled sarcoma of ear. The first three cases call for no comment, except that in the exostosis case it was necessary to throw forward the concha and meatus in order to attack it successfully. The fourth occurred in a man of sixty, who gave the following history. He had been totally deaf for eighteen months with the right ear, and had facial paralysis for twelve months and slight pain for a few weeks. A bright red growth was found occluding the meatus on that side, which readily bled. Examined further under ether the growth was found too extensive to remove through the meatus, so the external ear and meatus were thrown forward in the usual way, and as much as possible of the growth removed with a curette. A Stacke operation was now proceeded with, and much carious bone was subsequently removed, including the remains of the ossicles, together with more growth. The tegmen tympani was destroyed, and the dura involved. The patient made a good recovery, with material improvement in hearing and a marked lessening of the facial paralysis, and eight months after there was no return of the growth. The patient in case five was a boy of ten; the history was very unsatisfactory. He presented an extensive ulceration of the auricle, with exuberant granulations; he had already been under specific treatment with but slight result. There was general adenitis. The whole ear and part of the external meatus were removed, only the skin on the posterior surface of the auricle being saved; a large portion of the parotid gland was also removed, as were its posterior lobe and the affected cervical glands. The wound, which could not be entirely closed, healed by granulation; the patient made a good recovery, his health improving in a very satisfactory way. The external meatus, however, became occluded during cicatrization.

R. Lake.

Denker, A. (Hagen).—*A Case of Epithelioma of the Cartilaginous and Cutaneous Meatus and Auricle.* "Arch. of Otol," Vol. XXV., No. 2.

THIS commenced as a wart in the meatus, which recurred after removal, and after a year was thoroughly scraped away. Soon, however, the floor of the meatus became affected, and in spite of another clearance the greater portion of the meatus became filled with fungating granulations, and a nodule appeared on the antihelix, which microscopical examination proved to be epitheliomatous. The auricle and meatus were completely removed by means of the knife and sharp spoon, the healthy membrana tympani being left untouched. The large gap left was diminished by means of a sliding flap at the upper part, and the edges were brought together below, after being loosened by a liberating incision. The spaces left were covered by means of Thiersch's skin-grafts. Granulations which formed in the meatus looked suspicious, but were proved not to be malignant, and healing took place without narrowing of the passage.

Dundas Grant.

Hubbell, Alvin A. (Buffalo).—*Report of a Case of Otitic Brain Abscess, with Remarks on Diagnosis.* "Buffalo Med. Journ.," May, 1896.

A MAN, aged twenty, had complained for some time of headache, loss of appetite, and nausea. The left ear had discharged since he was six years of age. For three days he had had severe pain in the left ear and left side of the head. Upon examination a polypus was found nearly filling the left auditory canal, and there

was also a considerable offensive discharge from this ear. There was no swelling or tenderness over the mastoid.

On the following day the greater part of the polypus was removed. Two days later the meatus was somewhat swollen and painful, and the fetid discharge continued. The head symptoms had become more pronounced, and the patient seemed dull and restless. The pulse was sixty; respiration ten; temperature ninety-seven; and the pupils reacted slowly to light. An ice bag was applied to the side of the head and around the ear. The next day the pain in the head and ear was worse: opiates were prescribed. On the sixth day after admission he had a convulsion. On the seventh, another convulsion: pulse thirty-two, respiration four or five. Stimulants were freely given, and counter-irritation applied to back of neck. Vomiting. Delirium. On the eighth day, coma and death.

At the *post-mortem* examination the convexity of the brain showed signs of recent acute fibrinous lepto-meningitis. The same condition existed in a marked degree at the base. Moderately firm adhesion fixed the temporo-sphenoidal lobe on the left side to the upper border of the petrous portion of the temporal bone. Opposite the adhesion there was a cavity in the temporo-sphenoidal lobe as large as a walnut, lined by greyish necrotic tissue, and containing pus. This cavity was connected with the middle ear by two or three distinct openings through the roof of the latter.

The paper terminates with remarks on the frequency and diagnosis of cerebral abscess.

A. B. Kelly.

Mandelstamm.—*A Case of Acute Median Otitis with Mastoid Complications cured without Surgical Intervention.* "Ann. des Mal. de l'Oreille," March, 1896.

In the author's case inflammation of the mastoid apophysis was already evident at the initial period of the inflammation of the tympanum before pus was formed. Pulsations of some point of the tympanic membrane, often observed at the commencement of an acute median otitis, do not always prove the existence of a perforation. Pulsation only indicates the spot where perforation is produced in case of spontaneous rupture of the membrane; it is due to hyperæmia and pulsation of the vessels of the tympanum across a membrane relaxed by inflammation. In the author's case the pulsating spot corresponded exactly to an old cicatrix. Paracentesis must not be practised indiscriminately in all cases of acute inflammation of the tympanum. It is indicated always when rupture of the membrane is imminent, or where there are dangerous inflammatory symptoms or intense pain. It has a special indication in infants. At the commencement of acute median otitis it is essential before everything to remember the possibility of cure without surgical intervention. The same rule of conduct should be observed in acute inflammation of the mastoid apophysis. Too early intervention is as bad as waiting too long. The precise moment to interfere is an impossibility to lay down as a rule.

R. Norris Wolfenden.

Planat.—*Ménière's Symptoms in Young Subjects.* "Thèse de Lyon," 1894-5.

In the first chapter the author rapidly details the principal features of Ménière's disease in the adult, and passes directly on to his theme. From the sixteen observations which form the subject of the second chapter it appears that, speaking generally, the malady may (1) be engrafted on to an infective condition (scarlatina, measles, typhoid, pneumonia); (2) be consecutive to head injuries; (3) or attack a subject in apparently good health.

He has met with several patients who had adenoids, coryza, or pharyngitis. The etiology of the disease is evident in the observations. As to the pathology

many difficulties arise. The rarity of Ménière's symptoms in children and young adolescents is to be explained by the presence of communication between the labyrinth and the cavities in its neighbourhood.

With regard to diagnosis, epilepsy in its many forms might lead to the belief that the malady with which we are dealing was present, and the same may be said of Friedreich's disease. Treatment should be the same as in the adult. Bromides and iodides are to be employed in conjunction with inflation by the Eustachian tube. Revulsives may be used at the same time.

Prognosis varies with the etiological course which gave rise to the trouble. It is very grave if the disease complicates an acute infectious condition, but good if it arises during health.

Lacoarret (Waggett).

Raugé, Paul.—*Otitis and Mastoiditis.* "Bull. Méd.," June 24, 1896.

THIS is a paper showing how the anatomical division of the middle ear into two cavities or sets of cavities, separated from each other incompletely by the aditus, has gradually been given up, till now the tympanum, aditus, and mastoid antrum and cells are regarded as forming one complicated cavity. Up till quite recent years the surgeon and the otologist in dealing with this cavity kept strictly to the region considered by each his proper sphere of action, the surgeon restricting his interference to a Wilde's incision (always without success) and an occasional trephining of the mastoid, which, however, never went farther than the antrum. On the other hand the otologist approached the cavity through the meatus, his most daring operations being curettement of the attic or removal of the ossicles. The aditus remained a neutral territory untouched by either operator. The change from this state of affairs was due to both surgeons and otologists attempting to get more thoroughly at the true source of the disease; they soon found that there could be no partition of the ground, but the whole group of cells, etc., had to be regarded and treated as one single diseased cavity. Only after this did any true knowledge of the processes of otorrhœa arise.

Mastoiditis is probably never primary, but always follows a tympanitis. Even those cases described by Lubet-Barbon at the Société Française d'Otologie et de Laryngologie, if carefully enquired into, will generally be found to have some history or marks pointing to a previous tympanitis.

The otologist or surgeon nowadays who undertakes the treatment of an otorrhœa of some standing considers the tympanum merely the entrance to deeper seated parts which he will almost invariably have to attack.

In many respects mastoid abscess and empyema of the antrum maxillare resemble each other. Till quite recently known only in their acute stage, or when they showed on the surface—therefore comparatively rare diseases—they now are known to be very common, and to be the causes of what previously were intractable diseases, viz., chronic purulent nasal discharge and chronic otorrhœa. And as the causes of these are similar, viz., disease of accessory cavities, so ought the treatment to be. There should be as little hesitation about exploring the mastoid in a case of chronic otorrhœa as there is about exploring the accessory cavities in a case of chronic purulent rhinitis.

Arthur J. Hutchison.

(This paper has already been noticed in the JOURNAL by DUNDAS GRANT.)

Scheibe, A. (Munich).—*A Contribution to the Diagnosis and Treatment of Cholesteatoma in Otitis Media Purulenta Chronica.* "Arch. of Otol.," Vol. XXV., No. 2.

THE author confirms Bezold's opinion that cholesteatoma does not occur in cases in which the perforation of the membrana tympani is central with free edges. On the other hand, he holds that it is always present if the perforation borders on the

wall of the aditus—in the postero-superior border—or if, being central, its margin is attached to the inner wall of the tympanum. In the central cases the extension of epidermization is ascertained by inspection; in the marginal ones the intra-tympanic syringe has to be used one or more times, for the extrusion of epidermic masses, the meatus being previously carefully cleaned.

Out of forty-five cases, thirty-eight were treated by direct injection and insufflation, eighteen being cured. Gompertz's results, showing thirty-six cures in forty-nine cases under this treatment, are quoted. In the absence of urgent symptoms, he urges the use of this treatment after the removal of granulations, and, only if the passage to the aditus be too narrow, of the malleus as well. Persistence of fœtor is considered an indication for resection of the posterior wall of the meatus. In case of urgent symptoms, Siebenmann's chiselling operation is advised. [The removal of the ossicles is not advocated, and probably should be absolutely avoided if there is preservation of any useful degree of hearing power in the ear.—ED.]

Dundas Grant.

Stern, L. (Metz).—*Contributions to the Bacteriology of Otitis Media Purulenta.* "Arch. of Otol," Vol. XXV., No. 2.

THE author, with Zaufal, finds no marked relation between certain bacteria and special forms of purulent median otitis. On the other hand, three different phases of the disease may be noted which have more or less definite bacteriological peculiarities, as follows:—(1) The primary or early acute phase, with profuse purulent non-fœtid discharge, in which cocci—*e.g.*, staphylococcus pyogenes albus—predominate; (2) the later phase, with profuse fœtid muco-purulent discharge, in which rods greatly surpass cocci in number; (3) the last, in which there is a scanty fœtid crusting or cheesy discharge, showing bacilli of all varieties and practically no cocci. In a few cases of otitis media purulenta phthisica tubercle bacilli were found. These investigations were confined to patients who had not been under treatment, and whose meatuses had not been contaminated with oil or other matter. The material was conveyed from the ear to sterilized water, by means of a sterilized wire, or occasionally, where the discharge was very scanty, the ear was filled with sterilized water. Cover glass preparations were made by means of a swab, one being stained with aniline water gentian violet, or carbolic fuchsine, the other by Gram's method.

Dundas Grant.

Werhovsky, B. (St. Petersburg).—*Examination of the Duration of Hearing throughout the Musical Scale in Diseases of the Internal and Middle Ear.* "Arch. of Otol," Vol. XXV., No. 2.

THESE investigations were carried on by means of nine tuning-forks: A_2 , A_1 , A , a , a^1 , a^2 , f^3 , c^4 , $fsharp^4$, all being used for air conduction, but A , a , and a^1 only for bone conduction, the highest and lowest being for obvious reasons unsuitable for that method of testing. The charts of percentage of hearing power for the various forks are given in twenty-seven cases, eleven of sclerosis of the middle ear, fourteen of pure nerve-deafness, and one each of traumatic rupture of the membrana tympani and of the combination of nerve deafness with the residua of suppurative otitis. This solid and laborious contribution (like that of Alderton's, formerly analyzed in the JOURNAL OF LARYNGOLOGY, Vol. IX. p. 298) is of the utmost value, and is encouraging inasmuch as it confirms, instead of upsetting, the views which we have helped to popularize. The diminution of hearing for low tones (raising of lower tone-limit) characteristic of disease of the conducting apparatus is well shown in cases in which the diagnosis is supported by all the other received signs. In nerve deafness the general rule for a gradual diminution of hearing for the higher tones, more marked as they rise in pitch, is well exemplified, but the fact that there are more frequent deviations from this rule than in that for obstructive

deafness is also well brought out. In the case of combined nerve deafness and residua of suppurative otitis, the curve inclining downwards at each end of the scale is most striking. In cases of sclerosis, increase of bone conduction for all three forks was generally found, and for the lower more than the higher; but in the severer cases this difference was increased, so that for the higher there was actually diminished bone conduction.

Dundas Grant.

REVIEWS.

Archives of Clinical Skiagraphy. No. 2, Vol. I. June, 1896. By SYDNEY ROWLAND, B.A. Rebman Publishing Company.

IN this number there are six skiagrams, each briefly explained. Thus, the first (Plate VII.) is a case of hypertrophic osteo-sclerosis of the fibula under Mr. Clutton, and after follows a short dissertation on the difference between bone sarcomata and bony hypertrophies; but we doubt whether in an ossifying sarcoma of a round bone there would be transparency in its central part, as here stated. This would probably only occur in medullary sarcomata. The next, a revolver bullet in the palm, shows the very structure of the bone. Plates IX. and X. are of a fractured femur, the fracture extending into the joint. Plates XI. and XII. are most interesting deformities of the hands and feet. Page 23 is occupied with answers to correspondents. We entirely endorse our previous high opinion of the work Mr. Rowland is doing, and look forward to continued success in future numbers.

Handbuch der Laryngologie und Rhinologie. Herausgegeben von Dr. PAUL HEYMANN, Privatdocent an der Universität Berlin. 1. Lieferung, I. Band. Wien: Hölder, 1896. ("Manual of Laryngology and Rhinology." Edited by Dr. Paul Heymann. Part I, Vol. I.)

THIS is the first part of an encyclopædic work on diseases of the throat and nose, the appearance of which has been awaited with interest by all laryngologists. When completed, in a little over a year, it will extend to three volumes, dealing with diseases of the larynx and trachea, the pharynx, and the nose respectively. In carrying out this work the editor has had the assistance of over forty colleagues, including most of the well-known laryngologists of Austria and Germany, as well as a few from other European countries. The purpose of the work is to bring together the results obtained by observers in all parts of the world, so as to present a complete review of the present position of our knowledge in regard to the diseases in question. The enormous increase in the literature of the subject within the last ten years has made it impossible for a single author to undertake such a task; hence the need to adopt the co-operative method.

The part before us contains a very interesting and readable review of the history of laryngology and rhinology by the editor, and the beginning of an exhaustive article on the anatomy of the larynx and trachea from the pen of Professor Zuckerkandl. If the promise of this first number

be fulfilled in those which follow, as we are sure it will, the "Handbuch der Laryngologie" will become indispensable to all public medical libraries, and will be found on the bookshelves of everyone engaged in special throat practice.

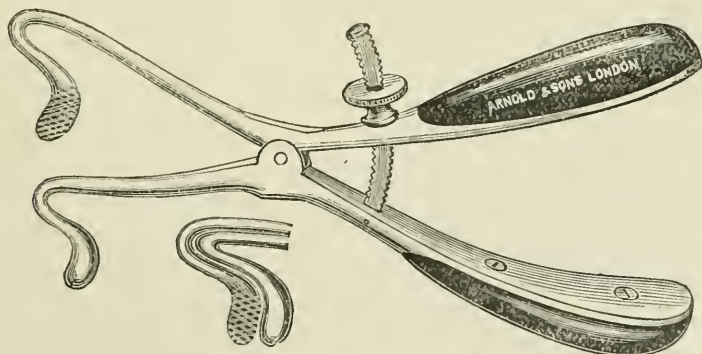
Middlemass Hunt.

IN the first volume, or rather first part, of the above book, one finds, not only a complete bibliographical index, but in that form which seems most appreciated by the reading members of our profession. It is, therefore, with considerable regret that we learn that the editor of this book has laid down on his assisting authors as a condition that the future bibliographies shall be complete and *chronological*. Now, when a journal for the sake of its subscribers publishes a periodical biographical index, it imparts no stamp of merit on any one individual work, as it tries to cover the entire range of *current* literature. But not only will it obviously necessitate either a colossal book to contain a complete index, or, if this bibliography is incomplete, each article noted is of necessity stamped with the seal of merit, and thus much that is worthless will receive that stamp. We trust that English authors will consider carefully whether such work becomes a book, however useful in the index medicus.

NEW INSTRUMENTS.

IMPROVED MOUTH GAG.

THIS gag is the invention of Mr. W. R. Ackland, Dental Surgeon to the Royal Infirmary, Bristol, who has very neatly and cleverly solved the question of how to reduce the bulk of the tooth-plate of the gag.



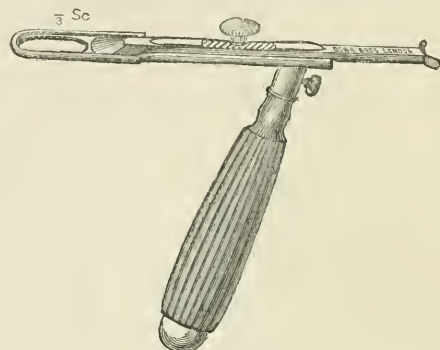
This is accomplished by causing the tooth-plates to lie in the same plane when the instrument is ready for insertion, or, in other words, edge to edge, not face to face. The obvious advantage of this is that the gag is much more easily introduced between the teeth than the old pattern.

This instrument is made by Messrs. Arnold and Sons, West Smithfield, London.

TONSILLOTOME.

Messrs. Down Brothers have made a tonsillotome to a new pattern for Dr. W. H. Kelson, of London, which, while somewhat resembling Mackenzie's, differs from it in the following particulars :—

1. The blade is considerably shorter. Having measured the distance



from the lips to the posterior border of the tonsil in a large number of cases, he found that this reduction could be made, and yet the most deeply placed tonsil reached with ease.

2. The handle blocks into the blade instead of screwing in ; it, therefore, cannot possibly rotate, as sometimes happens with the screw at the critical moment.

3. The handle makes an acute instead of an obtuse angle with the blade, whereby the operator's thumb has much greater power in thrusting home the latter.

4. The instrument is entirely of metal.

The instrument seems to do its work very satisfactorily.

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TURBINOTOMY IN NASAL STENOSIS. ANALYSIS OF 66 CASES.

By PETER ABERCROMBIE, M.D. (Glasgow),

Late Assistant Registrar Central London Throat and Ear Hospital.

ALL the 66 patients, whose cases were investigated, were operated on by Mr. Carmalt Jones, at the Central London Throat, Nose, and Ear Hospital, by means of his own special instrument, the "spokeshave" or turbinotome. It is not necessary to describe the operation itself, or the instrument used, as this has already been done more than once of late years.

Out of the 66 cases, relief was afforded by the operation of turbinotomy in 62; that is, in almost 94 per cent. of the cases the operation was successful in a greater or less degree. Only 4 cases of the 66 were not benefited by the operation, *i.e.*, a percentage of little over 6.

On the other hand, of the 62 successful cases, the relief afforded by the operation was very marked in 21 instances, and especially so in 4 of these. In 14 cases, decided improvement followed the operation; and in 27 patients the operation gave slight relief only.

As regards sex, 41 males were operated on, and 25 females.

The oldest patient was 71, on whom the result was most satisfactory.

The youngest was a little girl aged 6 years, where slight relief was afforded by the operation. But the large majority of the patients were young adults.

In practically all the cases, the nasal stenosis was the result of hypertrophic rhinitis to a greater or less extent. Over and above this condition, in 8 cases there were septal spurs; in 3, a deviated septum existed; in 10 cases, nasal polypi were present; in 7, enlarged tonsils and adenoids; chronic dry median otitis in 8 cases; adenoids alone in 4 cases; and in 6 cases there was chronic suppurative disease of the middle ear.

Most of the patients complained of the nose being "blocked" or "stopped up;" although a few in whom nasal stenosis was distinctly present did not seem to suffer very much inconvenience from it.

In most of the cases, mouth breathing was a prominent feature, and the effects of such an abnormal state of matters were very common and well marked in the majority of instances. Fourteen patients made complaints as to hearing. Dryness of the throat was extremely common as a result of the nasal stenosis necessitating oral respiration.

In 17 cases, one side only was operated on; in the remaining 49 both sides were spokeshaved. Turbinotomy alone was performed in most of the cases; but in a few, enlarged tonsils were removed as well or adenoids scraped in addition to turbinotomy, or both the above and turbinotomy. In most of the nasal polypi cases, in addition to the spokeshave, the forceps or snare was used; but the spokeshave was found useful in clearing the nostril of polypi in several cases.

As regards the use of anæsthetics in the operation: in 5 cases, nitrous oxide gas was administered, and was found to be quite effective, no pain being felt by the patient during the few seconds occupied by the operation.

In 31 cases, a ten per cent. watery solution of hydrochlorate of cocaine was applied locally in cotton wool plugs for a few minutes before the operation. But, in spite of this, pain was felt in every case, more or less; and in not a few of them great pain, indeed, was complained of.

In the remaining 30 cases, no anæsthetic, general or local, was used at all, and the pain was described as great, though momentary. Most of the patients describe the operation as being "very painful," "acutely painful," etc., even those who had cocaine applied. But a few do not seem to regard the operation as a very painful proceeding.

The bleeding, in every case without exception, was pretty profuse, but in no case was there alarming hæmorrhage at the time of operation. More or less bleeding occurred from the nose for several days afterwards in most of the cases.

In one man secondary hæmorrhage occurred 14 days after the operation; so much so, indeed, that he went to hospital, where he remained for two weeks.

Most of the patients operated on returned to their homes on the day of the operation: some of them on foot. In only one case (a very anæmic girl) did the patient actually faint after the operation, though many felt "faintish" after it.

A good many of the patients stayed in bed for a few days afterwards, or at any rate within doors. But not a few were not confined to bed or even the house at all. Several returned to work the following day. After-headache, more or less severe, and chiefly frontal, was present in most of the cases. In very few instances, indeed, were there any unfavourable symptoms following the operation, and in those few nothing alarming occurred.

Slight swelling about the nose and eyes was not very uncommon for a few days. In no case, so far as I can judge from patients' letters, has atrophic rhinitis resulted from the operation. As regards after treatment,

in all the cases cotton-wool plugs were packed up the nostrils to arrest hæmorrhage. An antiseptic lotion, to which tannic acid was sometimes added, was prescribed for most of the patients. Some were ordered unguentum acidi borici to apply up the nostrils ; and for the headache so commonly following the operation, and often complained of so bitterly, potassium bromide was usually prescribed. As a rule, for a week or so before operating the patient was directed to use an alkaline and antiseptic nasal lotion, as a preparatory cleansing agent.

In 2 cases, some time after the operation, and presumably resulting from it, a condition of pharyngitis sicca was observed. But in both of these cases the patients admitted that even with that they were more comfortable than before the operation with their noses blocked up.

Mr. Wingrave, in his microscopical examination of over 200 turbinals removed by the spokeshave, came across a few in which there were distinct evidences of atrophic changes present ; so that it is possible the 2 cases referred to above may have been cases of atrophic rhinitis in an early stage, and not cases where the operation of turbinotomy led to atrophic mischief. This latter is one of the drawbacks stated by some against the operation.

In no case examined after the operation has any trouble arisen from the opening up of the hiatus maxillaris, which latter, no doubt, may happen in some cases.

No external nasal deformity has been seen to result from the operation in a single case ; rather the reverse, indeed, occurs. The nostrils, being stimulated by the passage of air through them, become more active and patent, with the result that the nose becomes larger, and instead of being a small, deformed, and more or less useless organ, it becomes of a good size and shape, and has its function restored.

After turbinotomy, a reproduction to a greater or less extent of the inferior turbinal mucous membrane may take place, and this was observed in several of the cases. More especially so was this in one patient, where a small piece of the new turbinal, so to speak, was removed and microscopically examined by Mr. Wingrave, who found it to consist of perfectly healthy and normal mucous membrane, "complete in its details," and with no appearances either of atrophy or hypertrophy. This reproduction of tissue may go still further, and result in a kind of fungoid mass. In one case, such a mass had to be removed with the snare ; in other 2 it required reduction with the galvanic cautery.

The immediate effect of turbinotomy is to obtain a free passage of air through the nostrils, and many of the patients remarked on the great comfort this alone was to them after enduring a period of nasal stenosis with all its miseries.

As regards the remote results of the operation, the patient breathes easily through the nose in a natural fashion, instead of through the mouth as he did before ; there is less strain put on the respiratory muscles, the diaphragm and intercostals especially ; aëration of the blood is better carried out ; and the nose becomes larger, more useful, and also more shapely by having one of its functions properly restored.

In several cases ear symptoms, and especially tinnitus, were relieved

by turbinotomy. Some time after spokedhaving, in some of the patients, an appearance like atrophy was to be seen on examination, but with no fœtor, no crusts, and no difficulty in breathing.

On the whole, in suitable cases, turbinotomy is a most successful operation; and judging from results obtained so far, is not only a justifiable proceeding, but a highly desirable one in many instances.

SOCIETIES' MEETINGS.

THE BRITISH LARYNGOLOGICAL, RHINOLOGICAL, AND OTOLOGICAL ASSOCIATION.

Ordinary Meeting, July 17th, 1896.

Dr. GEORGE STOKER, *President, in the Chair.*

Dr. ROBERT H. WOODS (Dublin) showed a *Carcinomatous Larynx*, which he had extirpated from a man at sixty-five.

The symptoms began ten months previously with hoarseness, which progressed to aphonia. He had lately begun to suffer when swallowing and to be troubled with dyspnœa.

The right side of the larynx was occupied by a fungating and ulcerated mass of cancer, which crossed the middle line, both in front and behind, and extended from the epiglottis above to the true vocal cord below. An enlarged lymphatic gland under the right sterno-mastoid was also removed.

The wound was closed by Solis-Cohen's method, the anterior wall of the œsophagus being sutured to the skin in front so as to cut off the trachea from the mouth. No tracheotomy tube was inserted.

The patient did very well for a fortnight, his temperature never exceeding 99° F., but he then developed purulent bronchitis, and died on the twentieth day after operation.

Mr. WOODS also showed a *Speculum devised for the purpose of Facilitating Examination of the Post-Nasal Space in Difficult Cases.*

The apparatus consisted of a Gutsch's mouth speculum, into the front of which a pane of glass was fitted, thus preventing the patient from breathing through the mouth and compelling him to breathe through the nose, thus relaxing the soft palate. The tongue was at the same time kept down by the blade intended for that purpose in the original instrument. Thus both the nose and the mouth were necessarily open to the throat, when by putting the post-rhinal mirror into position (the stem lying between the lips and the speculum) the post-nasal space could easily be examined. The glass pane was placed at a slight angle, on the same principle as the glass in Siegel's ear speculum, and for the same purpose, *i.e.*, so that the

light from the forehead mirror should not be reflected directly back to the eye. The instrument is made by Messrs. Mayer & Meltzer.

Dr. DUNDAS GRANT: It is a most ingenious application of a physiological principle. It seems to me that this speculum will be of great advantage in the case of those patients with whom we have difficulty in posterior rhinoscopy. I should like to know what results Dr. Woods has had in practice with it, because some patients are so very irritable that they would be apt to cough out the mirror and the speculum as well.

Dr. SCATLIFF: My experience in regard to the mouth speculum is that patients retain it generally without any trouble. I have not had an opportunity of trying this modification.

The PRESIDENT: I am sure if Dr. Woods can provide us with a simple and easy method of making posterior rhinoscopic examinations, he will have conferred a benefit upon the profession. In my experience it is an extremely troublesome procedure.

Dr. R. H. WOODS: I have not had an opportunity of testing the speculum in a great number of cases, because after I had it made I thought it would be an additional advantage if the tongue plate could be hinged so as to depress the tongue to different degrees. I accordingly gave it to an instrument maker, whom I could not get to grasp the idea: and the result was that after repeated trials, extending over a couple of months, he only succeeded in doing everything that I told him not to do. I really have only tested it in a case or two, but so far as my testing went the instrument answered remarkably well. I must admit that I have not had the opportunity of trying it on one of those for whose use it is specially intended, and that is the reason why I should like the Association to try it. I think the instrument ought to be made in several sizes so as to fit different mouths, and also that the tongue plate should be made of bendable material, so that it might, if necessary, be accommodated to each patient without running the risk of breaking it after prolonged use.

Mr. G. C. WILKIN. *A Case of Sarcoma of the Vestibule.*

This patient, a woman twenty-seven years old, came to me last November. She had then a large polyp, filling almost the whole of the right vestibule and growing from its floor, bleeding very readily when touched. She complained of no pain at all, but it was an inconvenience to her, both as to its bleeding and as to its obstruction. I had the advantage of our President's opinion, as he was fortunately present when the case came in, and with his approval I was about to remove it. We found, however, that it bled so very readily that we considered it better not to do so until the patient could be admitted. I subsequently removed the growth, chiefly for microscopical examination, simply using nasal forceps, and I took it as completely away as I could. I plugged firmly with carbolic wool; there was very little hæmorrhage after the removal. I did not expect to entirely cure the case by this removal, but when the plugs were taken out two days afterwards, absolutely no thickening was visible. There was just a mark where the growth had been, but no

thickening and no hardness on the floor at all. Seeing this to be the case, I discharged the patient. The pathological report, which was received two weeks later, was to the effect that the case was undoubtedly one of sarcoma. I wrote immediately to the husband of the woman, and arranged to meet him at the hospital. I told him as much as I could about the risk of any recurrence, and asked him to allow me to see the patient once every three months. This I have done, and to-day there is, as you have seen, absolutely no sign of any recurrence. There is some myxomatous tissue about the middle turbinate, but that had nothing to do with the case. The patient refuses treatment for her nasal trouble, the breathing being now quite free. I should like to know the opinion of the Fellows on these cases, as to whether they are really sarcomatous or simply simulate sarcomata microscopically.

I may say that the only injury the patient admitted was that six weeks before being seen she scratched the floor of the vestibule with her finger nails; previously to that no growth was present.

Dr. B. J. BARON. *Abscess of the Frontal Sinus.*

The patient is a man aged fifty-nine years. He consulted me early last year, and gave the history that seven years before he had taken cold, had a persistent discharge from the nose, with blockage of both nostrils, especially the left, and a certain amount of pain over the left eyebrow, with swelling at its inner side, just at the root of the nose. On examination I found a good deal of polypus growth in both nostrils, especially the left side. On feeling around the swelling, which was elastic and evidently due to fluid, one found the bone over the brow to be somewhat thickened. There was also a foetid discharge from the nose. I removed the whole of the growth from the nose, and hoped to get the sinus drained in that way. This I could not do, for although the nose was quite clear, still the discharge went on and the swelling was persistent. Fearing the man might get into serious trouble, I suggested operation, which was performed, but not by myself. It consisted in making an incision over the inner half of the brow. A hole about the size of a sixpence, due to necrosis of the bone, was found underneath the incision. There was no polypus growth in the frontal sinus. A drainage tube was inserted into the left frontal sinus and also into the right, there being communication between them and pus in both. The operation was performed fifteen months ago, and you see the condition to-day. There is a constant dribbling of pus from the drainage tube, and a certain amount also drains into the nose. I have used various antiseptic solutions, and iodoform and boracic acid, etc., blown in through the small drainage tube, but all to no purpose, and as far as I can see this frontal sinus is never going to heal. One learns more by one's failures than by one's successes, and I believe the whole point of operation has been missed, because no attempt has been made to get drainage into the nose by enlarging the natural passages into the nose.

The patient refuses any further interference, and I bring him here to show a failure, and at the same time to ask men who are more experienced than I am, if anything further can be done short of another operation. I

know our President will recommend oxygen, and I shall be very pleased to learn the method, and to carry it out to the best of my ability. It has not been tried, but various other substances that are oxidizing agents have been used.

Dr. STOKER. *Case of Frontal Sinus Disease treated by Oxygen.*

The patient whom I show, a man, for nine years has had undoubted disease of the frontal sinus, with great pain and profuse discharge of pus from both nostrils, which stopped. Some months ago he developed nasal polypi in both nostrils. These were removed, and the usual cauterization practised afterwards, but although his nose was perfectly clear of polypi this profuse discharge still continued, and the pain over the frontal sinus still existed. Some two months ago he began to inhale oxygen in the usual way, viz., by means of a tube, the inhalations being taken three hours a day, not continuously, but intermittently, and now at the end of two months the pain has completely disappeared from the frontal sinus, and the discharge is nothing at all like it was. He tells me that there is a rather profuse discharge on rising in the morning, but once that has cleared out he has very little discharge during the day. I do not want to take any advantage of my position, but to mention this point in reference to the treatment. It was suggested that this treatment could not possibly do any good, because it was certain that there was a condition of polypoid growth in the frontal sinus. I, therefore, obtained a case of aural polypi, which is perhaps of more solid construction than the nasal polypi. I treated this aural polypi with the view of seeing the effect of oxygen. In the right ear on the sixth or seventh day the polypus shrivelled and came out after syringing, and now after seventeen days' treatment that in the left ear has quite diminished to small size and is rapidly disappearing; there is no discharge now from the left, and very little from the right.

Mr. LENNOX BROWNE: It is very difficult to speak on these cases. As regards Dr. Baron's case, I think most of the Fellows will be in absolute agreement with him that the failure was in not making a free passage from the frontal sinus into the nose in the first instance. This is a *sine qua non* in such cases, and I think if some of us would recognize more the importance of the enlargement of a small normal infundibulum, or the reopening of one obstructed by disease, we should find that the operation would be much more satisfactory. As to the future, there is nothing to do if the patient refuses operation. I do not see how oxygen is going to do any good, for if there is no passage it won't reach the seat of the mischief, and without free ventilation no satisfactory inhalation or irrigation is possible.

As regards Dr. Stoker's case, you are quite aware, sir, that there is a weak point in it. No one can be sure that there was a frontal disease at all, for unless you have opened into the frontal sinus I do not know how anyone can be perfectly certain that there is frontal disease. Nothing is more deceptive than the symptoms of disease of these accessory sinuses, and however the books may lay down certain hard-and-fast lines of diagnosis, we are constantly being surprised to find our diagnosis is contradicted when the supposed site is laid bare.

That has been my experience at least. Nor do I admit that necessarily a frontal sinus has myxomatous tissue within it. I have seen many cases where there was no myxomatous tissue, and this condition is simply a product of chronicity. I admit that oxygen inhalations are of great value in nasal disease and disease of the accessory cavities. Although I have not cured any cases by oxygen, I willingly concede that I have used it with considerable advantage. Certainly one case, a young lady from New Zealand, who has been for many years suffering with ethmoidal disease, has gained enormous benefit by the persistent use of oxygen. Another patient, also with ethmoidal and frontal disease, has also gained very considerable improvement. I cannot say they are cured, but I do say that both patients have been encouraged by its results, while under my observation, to purchase a bag for the purpose of continuing the treatment, while I have received very hopeful and grateful reports from them as to their improvement. That is something for us to know, because if the inventor says he has a "cure" in a certain remedy, and those who follow him find that they have good results, I think that it is as much as the inventor can hope for.

Dr. DUNDAS GRANT : There is one means at our disposal by which Dr. Baron might at all events fish for the passage into the nose ; that is, by putting in a Eustachian catheter from the opening which has been made into the frontal sinus, feeling with it for the infundibular depression, and then passing through it a long pewter wire. From the direction given to the pewter wire as it passes through the open extremity of the Eustachian catheter, it is quite on the cards that it will make its way down into the nose without there being any danger whatever, as I have found in more than one case. After introducing the pewter wire, an india-rubber drainage tube should be pulled through by means of it. As regards the application of oxygen, the facility for it is the most perfect one possible, because the patient has only to attach the tube of the oxygen bag to the drainage tube in the sinus to give the oxygen the fullest possible play.

I should be delighted to see a good result follow the treatment by oxygen, though I have my doubts as to whether it would be possible to obtain it in such a cavity as the frontal sinus. Of course, operations like Luc's, which would result in obliteration of the sinus, would mean removal of the whole of the floor of the frontal sinus and of the anterior wall, so as to allow the skin of the forehead to sink in and cicatrization to take place. Cures have resulted from this. The deformity is not very great, but it is certainly to be considered.

Dr. MILLIGAN : My experience in operations for frontal sinus disease is that unless a fairly large opening is made from the sinus into the nasal passage and maintained, patent retention of secretion and chronicity is induced. In order to secure complete arrest of suppuration, the main requirement from the first is free drainage. In connection with this subject I should very much like to have the advice of some of the Fellows present upon a case I have under treatment at the present moment. The patient was operated upon a few days ago for left-sided frontal sinus disease. The incision made was a vertical one in the centre line of the

forehead, and when the sinus was opened a large quantity of pus was found. The infundibulum was dilated, and a large drainage tube passed into the nose. In order, as far as possible, to avoid subsequent deformity, it has occurred to me that it might be worth while to pass a rubber tube, dilated at its upper end, into the infundibulum, and draw it down into the nose until the dilated end is held fast by the infundibular walls, and then to close the external wound entirely, all syringing, etc., being conducted through the end of the rubber tube projecting into the nostril. I should be glad to know if any of the Fellows have tried any such method of treatment, and, if so, what their experience has been.

Dr. DUNDAS GRANT asked Dr. Baron whether he had made use of Lichtwitz's or Hartmann's tube for inserting through the middle meatus up to the infundibulum. He himself had found them quite practicable for washing out the frontal sinus.

Dr. BARON said he had not used either of these tubes.

Dr. HILL: I think all would have gone well with this case if Luc's operation had been employed, and a very big opening made into the sinus. Irrigation is readily carried out if this be done, and the wound closes up. I have tried the other methods, which are very unsatisfactory. I have had to open the wound two or three times, and use instruments which were very difficult of manipulation. A big hole must be made, or it will close up.

The PRESIDENT: I would first of all distinctly suggest to Dr. Baron the use of oxygen. I should be very happy if he will allow me to undertake the treatment of the case with oxygen, which, like everything else, one has to know how to use, and I have had a good deal of its experience now. The oxygen should of course be passed in through the tube. No other opening is at present necessary.

Dr. BARON: The discussion unfortunately leaves me very much in the same position as I was before. I will certainly try oxygen, but operation the patient entirely refuses. As Dr. Hill and others have said, it appears to me that the whole of the matter lies in this—a wrong operation has been performed, and unless the proper one is even now done, cure cannot take place. It is a good lesson for us. I will try what Dr. Grant has suggested, though I do not feel very sanguine about the result.

The PRESIDENT: With regard to Mr. Browne's observations as to whether this is a case of frontal sinus disease, there is, of course, some truth in what he has said. The patient had all the symptoms which ordinary mortals like myself are led to regard as being indicative of disease of the frontal sinus, and had it not been so I should not have tried to treat the frontal sinus. The question is not what the disease is, but where it is. I may be wrong, but the man is better; pain has absolutely disappeared, and the discharge nearly so. For nine years that man has had this constant pain over the frontal sinus, accompanied with very profuse discharge. The discharge has lessened, and, therefore, I am encouraged to go on. With regard to oxidizing agents, I want to say that such are not at all in the position of oxygen. It is like employing the agent of a firm to carry out the work that should be done by the

principal. You may use peroxide of hydrogen, but it is only in contact with the diseased surface for a few seconds, which is absolutely useless, and it is very irritative. The whole essence of the oxygen treatment is the continuous exposure for a longer or shorter period, especially the longer period, to the diseased part. I recommend Dr. Baron to employ oxygen for three hours daily, with intervals of three-quarters of an hour; less than this is no good at all.

Dr. HILL. *A Case of Ulceration of the Pharynx and Larynx of Undetermined Nature.*

This patient, a male, aged forty, came to me two days ago with ulceration of the soft palate, a swollen condition of his epiglottis and arytenoid regions, and with some ulceration of the latter. He gave a history that he employed a telephone a good deal, and he had regularly used it after a person who had been affected with tuberculosis. The case is shown simply for diagnosis. What is this laryngitis due to? I have had a bacteriological examination made, but I have not yet received the report.

Mr. LENNOX BROWNE: I am placed in just the same difficulty that I have been with other cases. I want my friend Dr. Hill to tell me how many days that man had his throat bad before he presented himself. I want to know what his family history is. How many weeks had he been ill? (Dr. HILL: Several weeks.) I think it is all very well, and very likely exceedingly valuable, to bring a patient here and to say, "What is your diagnosis from looking at the patient?" But I say that is not the way to make a diagnosis "up to date." Here is a man with an œdematous uvula, and I am told that he had ulcerations two or three days ago, which he has not to-day. I venture to think that is not characteristic of tubercle. I should like to know whether the tubercle bacillus is in the secretions of the patient's throat. It would be much better to bring a diagnosis as complete as possible, and not to bring it simply for objective eye inspection—a sort of fishing inquiry. I am not able to say that that case is one of tuberculosis of the pharynx or of the larynx. I see nothing in the throat that is not consistent with a condition commonly seen in a man who has over-indulged in alcohol, and has thereby become receptive to a catarrhal inflammation with a possibly added insanitary infection. During the recent hot weather I have seen patients under insanitary conditions who have become overheated and taken cold by a draught of cold air catching them. I do not say that the case may not turn out to be a case of tuberculosis of the pharynx, but at present I do not see that it had any definite characteristics to justify the conclusion without much more exhaustive methods of examination than have been employed.

Mr. R. LAKE: In regard to Dr. Hill's case, I must say that looking at the small patches on the left anterior pillar of the fauces, they resemble extremely a condition met with in tuberculosis of the larynx. Although it is probably not true tuberculosis of the part, it is one of the preliminary stages of tuberculosis. I think if the bacteriological examination proves that the man has tuberculosis of his lungs, it would be interesting to see if by examining some of the matter from these superficial abscesses there are any tubercle bacilli there.

Dr. PEGLER. *Acute Otitis Media Hæmorrhagica.*

Dr. PEGLER : I may, perhaps, be allowed to remind you that this term was first employed by St. John Roosa in his treatise on "Diseases of the Ear." Two cases are described by this author, one of which commenced with pain and hæmorrhage and terminated favourably, without suppuration, precisely like the one about to be described.

McBride published four cases in a paper under the same title in the "Arch. of Otol.," 1885. One of these occurred in a gentleman who, whilst in a caisson, unwittingly rarefied the air in his tympanum by swallowing, when he should have performed the Valsalvan experiment. A blood clot surrounded by serum collected in the tympanum subsequently. This fact confirmed McBride in his belief that the hæmorrhage in these cases is due to rupture of the distended tympanic arterioles consequent upon the partial vacuum created in the middle ear by obstruction of the Eustachian tube, especially when the drum membrane has been rendered thick and unyielding by previous disease.

Barr records an instance ("B. M. J.," April 28, 1888) occurring in an infant of nine months and a half. The only explanation apparent seemed to be a hæmorrhagic tendency, due to some weakness in the vessel walls.

William Hill described his own personal experience of the disease at the Bristol Meeting of the British Medical Association, and spoke of it as an acute sero-sanguinolent otitis media. Paracentesis for relief of the pain was performed, and blood escaped freely from the opening before rupture had had time to occur. Roosa considered that such cases fell under the same category as his own. In the one about to be described there was a family history of apoplexy, though whether this is important or not I cannot say, especially as there is no evidence of atheroma or kidney disease in the patient herself; secondly, an antecedent cold in the head; and, thirdly, the occurrence of menstruation immediately following the hæmorrhage from the ear.

E. S., a single lady, aged forty, consulted me on April 23rd, 1896, for deafness and throbbing in the left ear, accompanied by bleeding. Three weeks previously, whilst travelling in Italy, she took a Russian bath, which caused great prostration, owing to a too long stay in the hot chamber. Later in the day she was exposed to a strong draught from an open window, in an hotel at Naples, but continued afterwards in fair health, except for a cold in her head, which dated from the above occurrence. At five o'clock in the afternoon preceding her visit to me, and after having been a week in London, she was attacked with severe pain in the left ear, which lasted till eleven at night, when, accompanied by a tearing sensation in the ear, blood flowed freely from the passage. The pain then became easier, but returned during the night, until relieved again by a second flow. The blood lost, altogether, was sufficient to saturate an ordinary sized lady's handkerchief.

The hearing was remarkably good on the affected side before this attack. The family history showed that an aunt on either side had died of apoplexy, and a paternal grandfather had had several "strokes." On removing a plug of wool from the meatus, which was saturated with blood, I found both tense and flaccid portions of the membrane bulging

slightly. A small perforation, through which blood-clot could be detected, was visible in the anterior quadrant. Raised conversation was heard at a yard, and a forty-inch watch in contact with the ear. A tuning fork on the vertex was heard louder on the left side. The right ear had long been deaf from chronic non-suppurative catarrh, and gave Rinne negative; the watch being heard with difficulty.

The general health in other respects was good. There was no pulse tension, but the bowels were slightly constipated. Menstruation, which was regular, had commenced the previous evening.

Bleeding from the ear having ceased, the only treatment advised after reassuring the patient, who was excessively nervous about her condition, was perfect rest in the house, and the exhibition of a saline purgative, t. d. s. A plug of sterilized cotton wool was placed in the meatus, and directions given to renew it occasionally.

Two days later the patient left town for the country, but returned on May 13th, when I ascertained from her medical attendant that there had been no return of the hæmorrhage, and no suppuration from the middle ear, though a furuncle had formed on the floor of the meatus. The drum membrane was still much thickened, but the outline of the handle of the malleus was beginning to reappear. The perforation was closed. The hearing power for conversation was improved, but the watch was audible only on contact. Catheterization elicited a dry sound, but did not increase the hearing distance. The patient left town again shortly after this date, and I have not seen her since, but she informs me that her hearing is practically restored in the affected ear to its former condition. The hæmorrhage in this case is not easy to account for. There had been a previous head cold, and therefore probably a catarrhal condition of the tympanic lining membrane, but in the absence of deafness during the interval it is not possible to say that the Eustachian tube was obstructed. There was no history of influenza, or of violent coughing or sneezing. The patient is not a subject of hæmophilia, so that a special weakness of the vessel walls could hardly be suspected to exist. Roosa regarded his cases as examples of acute otitis media running an unusually rapid and violent course, the exudation not merely escaping through, but actually breaking down, the walls of the vessels. In the above instance, although there were neither febrile symptoms nor subsequent suppuration, I am at a loss to offer any better explanation than that given by Roosa. The coincidence of a menstrual period may have had some causal connection. I shall be glad if any otologists present will give me their opinion.

Dr. MILLIGAN: I have seen several of these cases, and they have been in association with influenza. Curiously enough, in the second epidemic of influenza, I saw within a very short time six cases of acute hæmorrhagic otitis media. In all the symptoms were precisely the same: violent pain in the ear, accompanied by a fairly extensive hæmorrhage into the middle ear. In those cases, however, I must say I treated them on rather different lines from those adopted by Dr. Pegler, because it seemed to me that having blood in the middle ear, the first thing to do was to get rid of it. Consequently, I made a very long incision in the membrane, passed a catheter, and washed the middle ear out. The

cases did exceptionally well, and being of an acute character, lasted only a comparatively short time, while hearing was perfectly regained. It seems to me that if one is to allow the clot to take its chance of absorbing, there is a distinct risk that the hearing will not return to its original condition, and that permanent damage may result. As regards the indication for paracentesis, I would regard bulging of the membrane and the presence of fluid in the middle ear as signs of the first importance. When I perform a paracentesis, it is generally either to get rid of muco-pus or of pus itself. I do not quite agree with Dr. Pegler that the pus comes a few hours afterwards ; because if a paracentesis is to be performed to relieve pressure, the products are supposed to be there before the paracentesis is performed. Almost invariably, in my experience, when one performs this operation, the pus or the muco-pus issues out at the time, or may or may not be subsequently washed out. I should like to refer Dr. Pegler to a short article which I wrote in "The Medical Chronicle" upon this subject, in which several cases were recorded where blood cysts were found upon the membrane. Whether one could classify these cases as middle ear affections, or as affections of the membrane itself, I could not quite say. It seemed to me that they were really affections of the membrane ; that the blood vessels of the membrane had become immensely dilated from some special reason, and, having given way, had formed little blood tumours upon its surface. These cases are very interesting, and, I think, comparatively rare.

Dr. PEGLER, in reply to Dr. Milligan, stated in regard to the treatment of the case, that the patient was in an excessively nervous state, and would not hear of any operative procedure. He, however, saw no very strong indications for such interference, and trusted to the contained clot becoming gradually absorbed. He gave a favourable prognosis, and the course of events seemed to justify this, as well as the non-adoption of any active treatment. He did not think the case coincided with those he had seen described as following influenza, in which the hæmorrhages were practically confined to the drum membrane.

Card Specimens shown by Mr. LAKE.

1. Cystic middle turbinated bone removed during life ; no microscopical examination has been made.
2. Absence of tendon of tensor tympani. There is no history to this case, but it is probably a developmental error, the tympanum being free from disease, and there being no visible cicatrix in the membrane.
3. Curiously tortuous lateral sinus. Had this subject suffered with sinus phlebitis, cleansing the sinus would have been a difficult task.
4. Early or slight hyperostosis of the external meatus.
5. Calcareous deposit in right posterior superior segment of membrane.
6. Adhesion of malleus to promontory and incus to membrane tympani from an old woman of seventy years.
7. Persistent squamo-mastoid suture from a subject forty years of age.

DISCUSSION ON TRACHEOTOMY IN THYROTOMY FOR FOREIGN BODIES IN THE LARYNX.

Opened by the PRESIDENT.

Dr. G. STOKER : It will be within the recollection of the Association that at one of our meetings Mr. Marsh read the notes of a case of thyrotomy performed for the removal of a foreign body from the larynx, and stated therein that he had not considered it necessary to perform a preliminary tracheotomy. I entirely agreed with him, and, in doing so, called down the scientific wrath of several members of the Association ; but as the only valid reason put forward then against the procedure was that it was an offence against the canons of surgery, and as I believe this canon, as it is even sometimes with other canons, is more honoured in the breach than otherwise, I gave notice of this discussion in order to more fully state my own views, and give the Fellows an opportunity of again expressing those views, or the alterations of them, which time and profound meditation may have induced.

I think it will be conceded that this is not a question of necessity (the fact that Mr. Marsh's case proceeded to cure without trouble or complications proves this), and that, therefore, we have but to consider the question : "Is it expedient or not to perform a preliminary tracheotomy in cases of thyrotomy, when performed for the removal of foreign bodies from the larynx?" It seems to me that it will facilitate discussion if we simply take up, in order, the points—and they are very few—which may affect our decision.

The principal points are, I consider—

1. Bleeding. (a) Primary. (b) Secondary.
2. Respiration.
3. Affections of respiratory tract.
4. Dangers of the operation of tracheotomy itself.

I would first premise as an essential point in reference to all that is to follow, that the patient is placed for operation in the head-down position.

Bleeding during the Operation. There is no doubt that if a preliminary tracheotomy is performed and a tampon canula inserted, blood is thus prevented from entering the air passage during the operation and producing coughing or suffocation ; but this desirable consummation is also arrived at by operating with the patient in the head-down position.

Under any circumstances primary bleeding is not likely to be severe. It is *not* as if a tumour were to be removed and deep strictures in the larynx interfered with. At the most there may be a certain amount of granulation tissue displaced, and this only where the foreign body has remained a long time in the larynx ; and even then it can be easily and permanently controlled by pressure styptics on the galvano-cautery before the wound is closed. I fail to see how a tampon canula presents any advantage at this stage of the operation.

Now as to secondary bleeding. It is obvious that under the conditions mentioned this is most improbable if not quite impossible. It is no more likely to occur than in cases where foreign bodies are removed from the

larynx through the mouth, and I hardly think anyone will advocate a preliminary tracheotomy under such circumstances. If it does occur from the operating wound or incision, then the larynx must be reopened whether the preliminary operation has been performed or not.

If secondary bleeding is possible at all, it is only a very sudden onset that could prove dangerous, and this danger could be at once mitigated by placing the patient in the head-down position while the larynx was being reopened. As I presume a nurse or attendant would be always on the watch, this placing the patient in the desired position, if necessary, could be reduced to a certainty.

Respiration.—(a) Provided the patient is placed in the head-down position, breathing during the operation is perhaps easier than in any other position. This was shown by Dr. Howard, of New York, at one of the earliest meetings of this Association in a discussion on a paper on anæsthetics in operations on the nose and throat, when this head-down position in removing post-nasal growths was, I believe, first suggested.

(b) This operation, it must be remembered, is not undertaken to prevent suffocation, and it is, I believe, always easier to breathe through the natural passages than through a canula.

(c) Once the thyroid is opened, breathing must be easier, and the facility is again increased when the foreign body is removed.

It is obvious that in opening the trachea the nearer the opening is to the lungs the greater the danger, and that in avoiding the lower opening entailed by a preliminary tracheotomy, one is avoiding an evident and positive danger.

There is no doubt that if the preliminary tracheotomy is performed and the tampon canula is inserted, blood is prevented from entering the air passage during the operation and producing coughing or suffocation, but this, as already mentioned, is also arrived at by operating with the patient in the head-down position.

The after dangers to the air passages, such as bronchitis and tracheitis, are surely increased by the presence of a canula in the trachea, and more especially of a tampon canula, as it, above all, must cause an accumulation of mucous or other discharges in the trachea, and set up great irritation, if not actual inflammation.

Dangers of the Operation of Tracheotomy.—It will hardly be denied that there are certain dangers and difficulties and delays attending the operation of tracheotomy itself, *i.e.*, bleeding, shock, puncture of a vein, with formation of clot in the heart and instant death; the difficulty of finding the trachea in certain cases—for instance, young children and patients with fat necks.

In conclusion—

1. It must be remembered that a tracheotomy can always be performed after the thyroid is opened, if it should be found necessary.

2. That without a preliminary tracheotomy there is practically no danger from primary bleeding.

3. The danger from secondary bleeding is remote, if not impossible.

4. The non-performance of a preliminary tracheotomy does not present any danger in reference to respiration.

On the contrary—

5. Performance of a preliminary tracheotomy largely increases the liability to the after dangers of tracheitis, bronchitis, or lung trouble.

6. The presence of a tampon canula must prove a source of great irritation and may induce tracheitis, etc.

7. That the operation of tracheotomy does in itself present dangers which are avoided by omitting it.

These being my contentions, I am of opinion that the operation of a preliminary tracheotomy is not expedient where thyrotomy is performed for the removal of foreign bodies from the larynx.

Dr. R. H. WOODS : As far as the operation of thyrotomy is concerned, I have had a small amount of experience, perhaps four or five cases ; but I have never done one for foreign bodies in the larynx. I entirely agree with Dr. Stoker in thinking that preliminary tracheotomy for the removal of foreign bodies is an unnecessary operation. I find it very difficult to imagine the circumstances under which it can be at all excusable. If the foreign body has been in the larynx a very long time, it is conceivable that, by causing œdema, it might cause obstruction to respiration, which would call for tracheotomy in the first instance for the purpose of relieving the dyspnœa. If, on the other hand, the foreign body were there for a short time, and there was no dyspnœa, the tracheotomy could in that case be of no use. I think, therefore, whether a tracheotomy is to be performed or not is entirely settled before the surgeon comes to perform thyrotomy. The only other condition that occurs to me now as being a plea for a preliminary tracheotomy is the anticipation of the possibility of subsequent œdema from the infection of the mucous membrane by the sharp edge of the foreign body. If œdema of the larynx ensued, the performance of tracheotomy at the same time as the thyrotomy might be convenient, because you need not remove your tracheotomy tube until the œdema subsided ; but even under these circumstances the preliminary tracheotomy can be dispensed with, because if after the thyrotomy the larynx becomes œdematous, there will then be time to consider the question.

Mr. LENNOX BROWNE : I feel disposed to traverse all Dr. Stoker's premises, and, as a consequence, all his conclusions. I have asked a few of the Fellows if they have been in the habit of doing thyrotomy for the removal of foreign bodies, and I cannot find one who has. I have never done it, but I have performed tracheotomy over and over again, and I have time after time seen the foreign body immediately and forcibly expelled ; for that reason alone I should be inclined to do a preliminary tracheotomy. The operation is a very safe one, and without danger to the patient. The tube is taken out, and the wound may be allowed to close so soon as the foreign body has been removed. Thyrotomy is, I say, a rare operation for the removal of foreign bodies, and if the foreign body be situated in a portion of the larynx to be reached by splitting the thyroid, it would almost certainly be possible to remove it by instruments introduced through the mouth. Dr. Stoker has not reported any cases in which he has pursued this treatment ; therefore, I think it is a little previous to advocate a certain method which is contrary to the general

canons of surgery until some practical objection is found to obtain adversely to our prevailing practice, and I do not imagine that this discussion will lead to any serious change of procedure in the surgical world at large.

Dr. SCATLIFF: It occurs to me that as we are discussing the advisability of "*preliminary tracheotomy in thyrotomy for the removal of foreign bodies in the larynx*," we are entitled to consider the advisability of other alternative preliminary proceedings, and in that case I suggest that laryngotomy appears to me to be the more desirable operation, particularly considering that *every thyrotomy ends in a laryngotomy*.

If the foreign bodies be in the trachea below the larynx it is a different matter; and, moreover, we are not considering that question.

Dr. BOSWORTH: I have no experience whatever in regard to this operation for foreign bodies. My operations of thyrotomy have been used for growths or tumours, and I confess that I have always felt it a safeguard when cutting into the larynx to have a tube in the trachea. Tracheotomy or thyrotomy may be one of the simplest operations in all surgery, and it may be one of the most formidable. It is one of the operations in which we are likely to encounter very serious results. I should certainly give my vote in favour of preliminary tracheotomy.

Dr. HILL: I endorse what Mr. Lennox Browne has said, that very often when you have done your tracheotomy the whole thing is at an end. It is far better to have one incision lower down than right up in the larynx, where damage sufficient to permanently affect the voice may be done.

Dr. MILLIGAN: So far, my experience with thyrotomy has been entirely confined to the removal of growths. I have never had an opportunity of doing the operation for a foreign body in the larynx, but the little experience that I have had would, in general, certainly impress me with the safety, and I might say the advisability, of performing a preliminary tracheotomy. I think there is a great safeguard in a preliminary tracheotomy. In the event of the operation proving more difficult than at first anticipated, you at least have a way into the trachea, which allows the patient to inspire a full current of air. I think that this is a consideration which every operator should take into account. If, on the other hand, the operator is accustomed to perform thyrotomies, he may be bold and attempt the operation without any preliminary opening into the trachea. At the same time, one's experience of foreign bodies is such that I think great value is to be set upon making an opening in a position lower than the site of the foreign body, because the making of such an opening is frequently sufficient to cause complete emission of the body, and therefore an operation such as thyrotomy would not be called for. I think also there is another point to be taken into consideration, and that is the possibility of catching the foreign body and removing it through the tracheal wound. Both these points are favourable to the performance of tracheotomy, and opposed to thyrotomy, because one knows, however carefully thyrotomy is performed, and however carefully it is treated afterwards, there is a certain risk that the function of the vocal cords

may be more or less injured. From my slight experience it is difficult for me to say much, but I think it is important to have an expression of opinion from the Fellows as to whether, as it were, a double operation should be performed, or only one. I think also one point has not been touched upon in the discussion, and that is this: whether, in the event of performing thyrotomy and tracheotomy, it would not be advisable immediately after the performance of the double operation to close the tracheal wound, and dispense altogether with the canula.

Dr. STOKER: The general tenor of the remarks are entirely satisfactory to me. As I stated at the commencement of my paper, this discussion has nothing to do with the removal of growths, but simply foreign bodies. Mr. Browne's remarks, of course, are always very interesting, but they are entirely outside the question on this occasion. He has never performed the operation, so that his practical experience is *nil*. It is an abstract question, and we have to get at the reasons for and against.

Mr. Browne has devoted his time to fighting the air. The question is not at all as to the nature of the operation one would perform, or the methods one would pursue in removing a foreign body from the larynx; but, having decided to perform a thyrotomy, would you or would you not perform a preliminary tracheotomy, and any remarks outside this point are totally irrelevant.

I distinctly mentioned with regard to the closing of the wounds, because I said if bleeding does occur from the operation the larynx must be reopened, whether the preliminary tracheotomy is performed or not. I perfectly agree that the tracheotomy wound should be closed, but if there is any secondary bleeding from the wound, you naturally reopen it. Dr. Milligan, again, has expressed very valuable opinions with regard to the performance of preliminary tracheotomy for growths, and there is no doubt we are all agreed on this point. I have, however, been dealing with foreign bodies, and I venture to think when it does become necessary to perform thyrotomy for a foreign body which is not expelled by cough, and cannot be got out through the mouth, they will not perform a preliminary tracheotomy.

AUSTRIAN OTOLOGICAL SOCIETY.

First Special Annual Meeting (OTOLOGENTAG), June 28th and 29th, 1896.

("Monatschrift für Ohrenheilkunde," July, 1896.) Reported by Dr. JOSEPH POLLAK.

President—Prof. GRUBER.

Director S. HELLER. *Demonstration of a Case of Psychological Deafness in a Child.*

At the sixty-sixth gathering of German naturalists in Vienna, in the year 1894, I had the opportunity, in a discussion there held, to demonstrate the occurrence and the treatment of this abnormal condition in childhood, and I then described it as psychical deafness. At the same time I demon-

strated in seven cases the stages of development of the abnormality, and also the results of educational treatment. My experience during the last two years has strengthened my convictions with regard to the matter. The condition is apt to be confounded with deaf-mutism, and looked upon as beyond treatment. I hope to indicate the necessity for having children thoroughly investigated before being committed to deaf mute institutions, so that genuine deaf mutes may be distinguished from those suffering from psychical deafness, and that distinct treatment may be carried out. The case before us is one of a boy who, at the age of three and a half years, was handed over to the writer by Professors Widerhofer and Politzer, who agreed that the case was one of psychical deafness. The mother of the child is nervous, and he himself is always highly excitable, and very often sleepless, but never subject to convulsions.

Prof. Politzer found the appearances in the ear to be normal. In spite of this the child never learnt to speak. He could only utter fragments of words, and of words of two syllables only one or the other syllable, and that only very imperfectly. In the course of time even these rudiments of speech were almost entirely lost without any new ones appearing in their place. When the boy came under the writer's observation he did not understand a single word, and it was almost impossible to fix his attention upon other sounds. He reacted only in a very reflex way, and only when the sounds were extremely loud. Of the fragments of speech which he still retained, the words "mamma" and "Berta" were the most distinct, but these did not appear to have any signification to him; at the same time he was in a state of extreme motor agitation and excitement, which at times amounted to paroxysms, in which he shrieked in a loud tone, struck out all round him, bit the attendant, and injured himself.

After this excitement there occurred a reaction in the form of complete collapse. In contrast to the insensibility of the boy to single loud sounds, there stood out the fact that melodies, such as those issuing from a musical box or a hand organ, seemed to soothe the patient when he was in a condition of excitement. Attempts were made to string together the fragments of words which the boy possessed, first speaking them and then singing them in his ear, in the hope that unconsciously he might repeat them, but this failed completely. Even after a time he gave up uttering fragments of words in play, and even melodies seemed to lose their effect. It was only after four months' practice of the method of concentration which will be later described, that the recognition of the association of word and object began to be awakened. The word "ball" was the first which he learnt correctly, and notably the whole sentence, "Das ist ein—ball." Other words followed these, and the faculty for speech gradually burst forth and developed itself, so that the child began to have a certain degree of assurance in recognizing and selecting the various objects used in the lessons; and as he acquired certainty he began to hear more distinctly and from a greater distance, and furthermore became still more disposed to direct his attention to noises of different kinds, although at first he could not distinguish what they corresponded to. The progress was, however, far from being steady

or uninterrupted. When the excitement stage came on again his power of attention diminished, and he took less interest in what was going on round about him. However, although during these intervals there was an absence of progress, there was no marked retrogression, and the instruction could be resumed practically at the point where it had left off. Of late these fluctuations have been less marked, and there is every hope that they will not recur.

It must be noted that the above described method is not alone sufficient without a number of other precautions and subsidiary measures being adopted, such as will later be described. Those who see the boy must be struck by the fact that he has quite normal hearing perception, and is able to make use of sounds just as well as an average child of his age; and, furthermore, he asks questions. The two chief points in regard to the treatment of such cases in excitable individuals are: First, to combat the persistent excitability; secondly, to awaken and cultivate the faculty of concentration and perception in the little patients. With regard to the diminution of the excitability, it is necessary to remove all those external circumstances which are apt to irritate or disturb the unstable equilibrium. Along with the necessary therapeutic treatment and the strict isolation—if possible, in the country—there are still three methods which have been found particularly useful, namely, lying on the ground, gymnastics on the ground, including rhythmical, at first passive, movements of the extremities, and of the whole body. The method of concentration should then be started, and the patient should be taught to associate the spoken word with the object indicated, and in this way those physical processes should be developed which lead to the acquisition of normal speech.

Prof. URBANTSCHITSCH. *Demonstration of a Case of Psychological Deafness.*

The patient was a teacher, aged twenty-two, a Russian, who for the last eight years had become dull of hearing without any recognizable cause, and as the result of this increasing deafness had become affected with extreme nervousness. She was treated with galvanism for two months in Königsburg with good effect, but subsequently, owing to the illness of her father, her hearing became again more defective, and on account of this she was prohibited from all intellectual exertion. This had an unfavourable effect, and there resulted extreme mental depression with times of excitement. The patient frequently lost consciousness, thought that human flesh was mixed with her food, and, therefore, refused to take nourishment, while she further became affected with various delusions. Vertigo then appeared, but along with this there was, if anything, an improvement in her hearing power. The patient apparently made repeated attempts to commit suicide, but this was only a pretence, as she only did it in the presence of other persons. In the further course of her illness she was treated by various physicians by galvanism, static electricity, and catheterism without result, and her ear trouble appeared to be quite incurable. Towards the end of December, 1895, she came under Prof. Urbantschitsch in the general polyclinic. On examination, both

tympanic membranes were found to be slightly indrawn, but otherwise fairly normal. The cone of light was shortened and a slight hyperæmia of the wall of the labyrinth was recognizable through the membrane. Hearing for speech was almost entirely gone, and the patient only perceived single words through the hearing trumpet, and these she misinterpreted. Vowels shouted into her ear without the trumpet produced a distinct auditory impression, but the patient could not repeat them correctly, and confused the various vowels one with another. The tuning fork was heard equally by air and bone conduction, and Kinné was negative on both sides. The watch was not heard even in contact. On the other hand, the patient distinguished loud accordion notes wonderfully well, and recognized single tones from *contra* F up to *f* 4. The tones of Galton's whistle were heard up to nearly the normal limit of perception. Galvanic reaction indicated an increased sensibility of both auditory nerves. The high degree of the deafness for spoken sounds contrasted singularly with the fairly good hearing for musical tones, on which account the idea arose that the former was not in reality a deafness properly so called, but possibly, at least in part, a defective understanding for speech; therefore, in part at least, mental, and not entirely physical. On careful inquiry from the patient as to whether she did not perceive sounds of spoken words, she stated that she could hear them when uttered with a moderate degree of loudness, even from some distance, but that she did not understand them. At the same time, it was remarkable that occasionally later on, sometimes only after an hour or two, a word, or sometimes even a sentence, which she had not previously understood suddenly flashed again upon her mind. This last observation seemed to prove with certainty the presence of at least a partial mental element in her defective hearing.

Towards the end of December the hearing exercises were started, and within the first few weeks the results confirmed the opinion that the case was one of partial mental deafness, and the patient was able within two weeks to hear many words and short sentences quite correctly, although at first she mistook even single vowel sounds. At present, although she is far from normal, she understands speech when uttered close to the ear, and without any very great degree of loudness. Single words in the middle of a sentence are frequently incorrectly or not at all understood, and this also when the word is shouted loudly in the ear. Occasionally also the patient understands only the beginning and the end of a sentence, and only later on the remaining words, sometimes after a few seconds. Sometimes a short sentence was not understood at all, while each word of it was understood perfectly well when forming part of another sentence. When the former sentence was repeated it occasionally occurred that the patient said she could not make out a single word, but remarked that it was the same sentence that she had previously failed to understand. The psychical character of her disturbance of hearing exhibited itself equally when her own mother tongue, Russian, was made use of, as well as French, with which she was well acquainted.

At present it is possible to carry on a certain amount of conversation with the patient in a somewhat subdued tone of voice, and even in distinct

whispering close to the ear. There is a slow increase in the hearing power for musical tones also, so that occasionally she recognizes fragments of melodies, or even short tunes, whereas at first she could only appreciate single tones, and not combinations or sequences.

Prof. GRUBER pointed out that there were various forms of psychical deafness which had to be distinguished. Some individuals are so backward in their mental development that they hear individual sounds perfectly well, but when complete words, or a series of words, are concerned, they are quite unable to follow them, and only pick out individual tones which have struck them, and repeat them. In such cases the memory for words has to be exercised. Much depends upon intelligence, and as we run over the whole line with a single glance, and read it without being able to see each individual letter, so in the same way the practised individual can follow with the ear without hearing each individual sound. Hence it happens that many individuals of this kind are long looked upon as deaf mutes, whereas they hear sufficiently well to learn to speak if their defective powers of apprehension and of memory are kept in view during their education. Prof. Gruber mentioned that he had at the time under his care such a case in a boy nine years of age, who had been declared to be an incurable deaf mute by a skilled aural surgeon four years previously. When he first saw the boy he made the diagnosis of psychical deafness, and since then a rational method of instruction had been carried out, with the result that the boy was able to understand ordinary conversation in his mother tongue, and to speak in an almost normal manner.

Prof. URBANTSCHITSCH. *A Demonstration of Eight Cases of Radical Operation, in which the Retro-Auricular Opening had closed.*

1. A patient, aged twenty-one, who, when eight years of age, had a suppuration in his right ear as the result of measles. The radical operation was carried out on the 11th December, 1894. In the beginning of February, 1895, the cavity was dry, and it was only at long intervals the seat of a slight exudation. The opening has since then been closed, and the hearing has remained unaltered.

2. A girl, aged fifteen, who for twelve years had suffered from purulent inflammation of the right middle ear, with frequent headaches. The radical operation was performed on the 4th January, 1895, and in the middle ear there were found carious and cholesteatomatous foci. The cavity was dry at the beginning of the following April, and has remained so ever since. Before the operation the watch was heard at one centimètre, whispered voice at fifteen centimètres; after the operation the watch was heard at thirty centimètres, and the whispered voice at six mètres. There was in this case a remarkable re-growth of tympanic membrane extending to about one-third of the normal one.

3. A youth, aged sixteen, with purulent inflammation of the left middle ear of three years' duration, with severe headache and bodily weakness. The radical operation was carried out in January, 1895, and from the following September onwards the cavity remained quite dry. The hearing has improved, and the headache and weakness have quite disappeared.

4. A man, aged twenty-two, who for ten years had suffered from left-sided purulent median otitis, with paralysis of the facial nerve. The radical operation was performed on the 23rd January, 1895. There was a cerebral hernia into the attic. Since the 30th May the cavity has remained dry. The hearing is unaltered, and the facial nerve still parætic.

5. A man, aged twenty-six, who had had suppuration from his right ear for three years, and since 1893 several attacks of insanity. The radical operation was carried out on 7th February, 1895 (cholesteatoma). A few days after the operation there came on a facial paræsis, which, within a week, developed into paralysis, then slowly passed off, leaving behind it a slight spasm of the upper eyelid; ten weeks after the operation the cavity appeared dry, and remained so; the head of the stapes and the tendon of the stapedius muscle were plainly visible. The hearing, which before the operation was *nihil*, increased to two mètres for the watch, and eleven yards for the whispered voice. Since the operation there has been no further mental disturbance.

6. K. B., aged eighteen, affected with suppuration from the left ear, as the result of measles, since she was two years of age. The radical operation took place on the 3rd December, 1895. On the 15th of that month she was attacked with scarlet fever; since the 26th January, 1896 the cavity has remained dry and the hearing unaltered.

7. A youth, aged seventeen, who for three years had suffered with bilateral purulent otitis following measles. On the 23rd October, 1895 the right ear was operated on, and since the 27th of the following December the cavity remained dry. The hearing increased from twenty centimètres to two yards for the whispered voice. The left ear was operated on in January, 1896, but it still continues to emit a moderate amount of secretion.

8. A man, aged forty-four, who for eight years had suffered from suppuration from his right ear, and with frequent attacks of severe headache and vertigo. On the 12th February, 1896, the radical operation was carried out. Since the end of May the cavity has remained dry the hearing unaltered.

Prof. GRUBER. *Angioma of the Auricle treated by Operation.*

Prof. Gruber showed a drawing from nature of an angioma of the auricle, which from its outward appearance gave no suggestion as to its nature, but presented all the appearances of an ordinary sebaceous tumour and as such it was submitted to operation. It showed itself as a broad-based tumour of the size of a pigeon's egg, situated on the concha of the left auricle overhanging the external auditory meatus, and covered with skin identical in colour with that of the normal ear. Four weeks before presenting himself in Prof. Gruber's clinic the patient received accidentally a blow on the ear from a loaded sack. From this there resulted a roundish excrescence of about three millimètres in diameter on the most prominent part of the growth, the floor of the excrescence being covered with pus; in all other places the skin was perfectly normal. According to the patient's account he had had this growth for about thirty years, and its increase

in size had been exceedingly slow. It was never painful, but highly elastic, immovable, and without the slightest trace of pulsation. It did not interfere with the hearing, and caused no discomfort, so that the patient only sought assistance on account of the superficial ulcer resulting from the injury. From all these circumstances it was taken for a sebaceous tumour, and all the more as it is well known that the large sebaceous glands in the concha frequently give rise to tumours of that sort. There was never any bleeding from the growth even after the injury.

The operation was carried out on the 16th of May of last year, by means of two crescentic incisions, such as would allow of the separation of the cutis from the supposed cyst. This, of course, was not possible, and the incisions caused a profuse hæmorrhage, which showed at once that the growth was a vascular one. As rapidly as possible the growth was scraped away with the help of a knife and a sharp spoon, very little blood was lost, and an iodoform compress was applied. The wound healed perfectly without suppuration.

The case presents a good deal of interest. Vascular new growths on the auricle are, as is well known, either flat teleangiectases, and they are characterized generally by their livid colour, sometimes by pulsation—or, on the other hand, they are sometimes very rapidly growing cavernous tumours. In Prof. Gruber's experience, when the tumours were not livid, they pulsated so that the diagnosis was generally easy; but in the present case neither of these signs was present, and one was driven to the opinion that the growth was a sebaceous cyst. From the appearance one would have taken the growth for a fatty tumour rather than for an angioma. The microscopical investigation of the tumour showed that it was cavernous, and had developed subcutaneously and without any large arterial branches. The case shows also that such tumours, when not too large, and when they are free from pulsation, may be removed by means of sharp instruments, without fear of any serious degree of hæmorrhage.

Prof. POLITZER. *Demonstration of a Case of Recovery after Otitic Pyæmia with Thrombosis of the Jugular Vein and Purulent Metastasis in the Left Elbow Joint.*

The patient was a young man, aged nineteen, who when seven years old suffered from severe scarlatinal diphtheria, which extended over the pharyngeal, nasal, and buccal cavities, and to both tympana. There was almost complete destruction of the membranes, and at first total deafness. During convalescence the hearing gradually improved, but there still remained a certain amount of deafness; the suppuration had slowly disappeared, but the perforations remained persistent.

Ten years from the beginning of the diphtheritic otitis, the patient became affected with an acute recurrence of suppuration in the right ear, and severe fever and pain in the mastoid region, so that on the sixth day it was necessary to open the mastoid process. After this operation, and the establishment of a communication between the operative opening and the tympanic cavity, the fever still continued, and during the following two days oscillated between 39° and 40·3°, so that it was then necessary

to expose the lateral sinus. This appeared normal on inspection, but in the blood drawn from it by means of a hypodermic syringe streptococci were found to be present.

After this operation no improvement took place, but, on the contrary, daily rigors came on with the characteristic fall of temperature below the normal, followed by elevation to between 39° and 40° . Along with the onset of the rigors there developed a painful cord-like swelling on the right lateral region of the neck, which was recognized to be a thrombosis of the jugular vein. These daily rigors with remittent temperature lasted for fourteen days, during which a phlegmonous inflammation developed round the thrombosed vein, and the patient presented signs of almost complete exhaustion. On the twenty-second day a purulent metastasis occurred in the left elbow joint, and from that time onwards the rigors ceased, and the temperature fell pretty rapidly to the normal. Four weeks later the patient was able to leave his bed, with an ankylosis of the left elbow joint. During the subsequent two years there had been only occasionally a slight purulent discharge from both ears.

Prof. Politzer would class this case along with those rare ones of recovery after otitic pyæmia with thrombosis in the sinus and in the jugular vein published by Gruber, Hesler, Urbantschitsch, Wreden, and himself. In this case there was obviously an inflammation of the vein produced by extension of the suppuration from the floor of the tympanum to the bulb of the jugular vein, and from here to the vein itself. According to Politzer's observations, otitic pyæmia with metastasis runs a more favourable course than septicæmia without metastasis.

Dr. BING. *Demonstration of a Case of Chronic Suppurative Inflammation of the Middle Ear, Cured only after a Removal of the Malleus.*

A woman, aged forty, had suffered with her ears probably since scarlet fever in childhood. She had, however, not sought advice with regard to it until six years ago, and since then she had been treated by various people without success. Four years ago she came under Dr. Bing's treatment, and he found the left ear healthy but the right one discharging, and after syringing the meatus he found inflammatory swelling of the soft parts. There was a loss of substance in the membrana tympani, limited in front by the handle of the malleus and by a part of the antero-inferior quadrant of the membrane, while the posterior border was not sharply defined; behind the manubrium there was a niche filled with granulation and inspissated pus, which had to be removed by means of the probe. Above the short process there was a perforation in the membrane of Shrapnel, which was also filled with exudation. The whispered speech could be heard at a distance of three mètres.

The treatment was confined to cleansing by instillations and syringing. The granulation and suppuration were partly removed by the application of perchloride of iron and alcohol drops. Improvement took place, but not complete recovery. Dr. Bing then sent the patient, in June, 1895, to Prof. Politzer's clinic for removal of the malleus. This was done under slight chloroform narcosis without accident. The malleus presented no signs of caries. On the fifth day the patient returned to Dr. Bing. The

suppuration still continued, and in the situation of the manubrium there extended from above a soft structure with a sharp point below, which was very tender on probing, but completely shrivelled up after repeated cauterization with perchloride of iron. There was a disturbance of taste on the corresponding side of the tongue, and various paræsthesiæ in the region of the trigeminus over the right temporal and malar bones, which lasted for four weeks, then gradually disappeared. After the use of alcohol instillations for a few weeks the otorrhœa completely stopped. At the present time the meatus is quite dry, the anterior half of the membrane is reduced to a small residuum, which allows of a view of the tympanic orifice of the Eustachian tube, and the upper segment of the tympanum was attached below to the inner wall of the cavity. This was quite dry, of a whitish grey colour, and covered with skin. The head of the stapes could be seen, and the hearing power for whispered speech was seven mètres.

Dr. GOMPERTZ. *A Patient on whom the Radical Operation with Körner's Flaps had been Performed.*

After healing, the antrum and the tympanum seemed to have so grown together that the meatus appeared to be quite closed in its deeper part, and only to communicate with the tympanum by a very narrow orifice. After the cessation of the secretion which found its exit through this orifice, the opening began spontaneously to enlarge, obviously through absorption, not through necrosis of the cuticular flap which covered it, and after fourteen days the antrum, the attic, and the tympanic cavity were seen covered with a delicate shining cicatrix, perfectly freely open just as at the present time.

Dr. MAX. *A Case of Malformation of the Auricle Rectified by Operation.*

After paring the edges of the cleft, and the application of three stitches, under cocaine anæsthesia, the defect was completely rectified.

Dr. MAX. *Modification of the Polypus Snare.*

The ordinary handle was used, but the shaft was very thin, and bent in such a way that the anterior part was somewhat higher than the posterior. Instead of the ordinary steel wire he used a fine silver one. He had employed the instrument for three years with every satisfaction. It had the advantage that it could be introduced even in a narrow swollen meatus with very slight pain to the patient.

Dundas Grant (Trans. and Abs.).

(To be continued.)

BELGIAN SOCIETY OF OTOTOLOGY AND LARYNGOLOGY.

Meeting of 7th June, 1896.

President—Dr. DELIE.

M. BAYER. *The Microbe of Ozæna. Demonstration of the Coccobacillus of Ozæna in different stages of the Disease.*

M. DELIE. *An enormous Mucous Polypus from the Nasal Fossa.*

These polypi were taken from a man aged fifty-four, who had suffered from nasal obstruction for more than twenty years. The nose was distended from the root to the point; polypi protruded from the nostril and hung down into the pharynx.

By a lucky chance, the whole mass was removed from the left fossa by a single application of the cold snare; it weighed 40 grammes. The polypi in the right side required several applications of the snare: together they weighed 63 grammes. Thus the man had had in his nose polypi weighing 103 grammes.

M. DELIE. *On the Treatment of Spurs of the Septum.*

So long as deflections or spurs on the septum cause no inconvenience, they should be left alone. They should be removed (1) when they impede the free circulation of air in the nose; (2) when they give rise to troublesome reflexes; (3) when they are the seat of morbid processes (ulcerations, hæmorrhages); or (4) when they constitute a deformity in a nostril. It is worth noting that, apart from neoplasms of the nose or naso-pharynx, the greatest obstacles to free nasal respiration are situated in the anterior third or half of the respiratory portion of the nose, and less frequently in the posterior quarter. Narrowness of the middle portion of the lower part of the nose does not much interfere with respiration, provided the rest of the nasal cavity is of normal capacity.

In the anterior third of the nose there are two principal causes of obstruction—viz., hypertrophy of the inferior turbinated and spurs on the cartilaginous septum; in the posterior quarter the only cause of obstruction is hypertrophy of the posterior end of the inferior turbinated body. The spurs are mostly, if not entirely, cartilaginous.

What is the best method of removing them?

Bosworth's saw is more or less a blind and coarse method: it gives pain, in spite of local anæsthesia; it causes hæmorrhages; and the surface it leaves is rough and irregular, cicatrizes slowly, and is subject to various complications. Still, it is useful for very hard bony spurs.

Galvano-cautery is little used; it is too slow; it is followed by post-operative reflexes that last a long time, and its action is also painful.

Electrolysis avoids hæmorrhage, and has a sure action; but it is impossible to limit its action and prevent the occurrence of permanent perforations of the septum. Pain, both local and radiated, is produced at the time, and lasts for days in some subjects.

My gouge, with lateral guides (made by Fischer, rue de l'Hôpital Bruxelles), merits a place of distinction amongst such instruments. Its action is certain, very rapid, very clean, free from immediate dangers and later complications, and it is very simply and easily manipulated. It is the least painful of all methods of operation—a simple application of cocaine produces a sufficiently deep anæsthesia even in very nervous, excitable patients. I have never had to stop in the middle of an operation. The little shoulders on my gouge act as guides, and limit its action, making it impossible to perforate the septum. Placing the gouge against the anterior end of the spur, one pushes it rapidly backwards, in the main axis of the spur (when the spur is osseous a mallet may be used), and the whole operation is over in less time than is required to put a saw into position. I have never seen serious hæmorrhage, because the larger vessels of the nose are lower down than the spurs and are not touched. (Contrast the operation with the saw.) Simply wash the nose with warm aseptic water, and a little resorcin in oil (one in ten). The edges of the wound rapidly unite without painful or inflammatory reaction or the formation of any slough. With my gouge I have never seen a permanent perforation produced. Even in cases where the apparent spur was really a >-shaped bulging of the septum, and where accordingly it was impossible to operate without producing a perforation, the two edges soon became soldered together and perfect union resulted. The same is true of what I call "spurs of the nostrils"—i.e., irregular, often conical, projections from the anterior extremity of the septum.

If during cicatrization adhesions seem likely to form or exuberant granulations spring up, the part should be massaged with boric vaseline or resorcin in oil, or in extreme cases cauterized with trichloroacetic acid.

MM. BAYER and DELSTANCHE both spoke in favour of the instrument.

M. DELSAUX. *A Case of Otitis Media Purulenta causing Sinus Thrombosis.*

M. X., age thirty-two, had had otorrhœa (left) for ten years; consulted me in February of this year. I found copious purulent discharge, double perforation in the membrane, with a small polypus projecting through the postero-inferior perforation; much pain, insomnia, and fever for two days. I removed the polypus, and ordered boracic treatment, with instillation of phenate of cocaine.

Two days later pain in mastoid, specially towards the point; next day pain worse, accompanied by shiverings, fever, cephalalgia; head fixed as in torticollis. Opened mastoid, keeping specially towards the point; a little pus found in the cells, but no purulent collection. Smell very strong, like that of an empyema of the maxillary sinus. Antiseptic dressings; great improvement, and almost complete disappearance of the pain for three weeks.

Then came on intermittent fever, frequent rigors, left frontal headache, tenderness on pressure along the left sterno-mastoid, head fixed, skin sub-icteric. At the postero-superior part of the meatus, at the junc-

tion of the cartilage with the bone, a fistula was found about two centimètres long. Guided by a probe in the fistula, I removed part of the posterior wall, and entered the antrum. Pus and blood came away from a point somewhat further back. For the next fortnight patient was sometimes better, sometimes worse; temperature as high as 40° C. Then albuminuria appeared; weakness, œdema of legs and left hand. One morning intense dyspnœa. Pressure on the left side of neck produced a copious discharge of pus from the wound. A counter opening was made in the neck and tracheotomy performed, but the patient never awakened up from the chloroform sleep.

Autopsy.—Dura mater thickened; left hemisphere of brain covered with a layer of green pus, tending to collect about the Sylvian fissure; thrombosis of left lateral sinus as far as the torcular; also of posterior half of right transverse sinus, and of the petrous sinus. The thrombus extends along the internal jugular towards the root of the neck; the whole left sterno-mastoid region bathed in pus; kidneys decomposing.

The osseous wall of the sigmoid sinus is eroded, and the fistula in the postero-superior wall of the meatus leads directly into the sinus. Two other purulent tracks are found in the outer surface of the mastoid process, one in connection with the operation wound, the other lower down, still covered by the fibrous attachment of the sterno-mastoid muscle.

M. BECO: Let me report a similar case which I saw lately.

A child, ten years old, had had otorrhœa, which had ceased, but reappeared during convalescence from pneumonia. When I saw the case there were hectic fever, many rigors per day; extreme emaciation; consciousness intact, except, during the febrile attacks, a little delirium; from time to time slight pain in the left temporal region; mastoid intact, and quite free from pain even on strong pressure, except at the extreme point; meatus free, wide, with no affection of the postero-superior wall; perforation of the membrane, filled with a small drop of fœtid pus; temperature 40·7° C.

I opened the antrum, having to penetrate eight or ten millimètres through very dense bone, and got away half a spoonful of brownish pus. The superior walls of antrum and tympanum were destroyed, and the suppurating cavity extended far back. I curetted thoroughly, being very careful in dealing with the posterior wall, where there was the danger of opening the lateral sinus. Iodoform gauze dressings.

After three days of improved health the fever returned, not two or three times a day, but once in twenty-four, thirty-six, or forty-eight hours. During three weeks careful dressing and exploration of the wound were carried out, then the patient was chloroformed again and a search made for the source of infection. Forwards nothing was found, but from directly inwards and backwards considerable masses of bone were removed from the base of the pyramid. Pus was removed apparently from the posterior surface of the pyramid; from that time improvement set in, and the child is now in perfect health.

M. SCHIFFERS reminded the Society of a case of phlebitis of the cavernous sinus, which he had presented to the meeting at Antwerp in 1894.

M. GOUGUENHEIM presented a *New Instrument* for opening into the antrum maxillare through the alveolus.

M. HENNEBERT. *Epithelioma of the Ear.*

At our last meeting in February (*see JOURNAL OF LARYNGOLOGY*, p.242) I reported a case of epithelioma of the left ear. About a month and a half after the operation complete recurrence *in situ* had taken place; paralysis of the left facial nerve gradually came on; the patient grew steadily weaker, and died at the end of May, about six months from the onset of the disease.

Microscopic examination of the growth confirmed the diagnosis of "epithelioma."

The tumour was an enormous, ulcerating and fungating cauliflower-like mass, fixed to the left temporo-parietal region; greatest diameter about 12 centimètres, with a deep excavation in its centre. It pushed the auricle downwards and forwards, and extended along the temporal and zygomatic fossæ. Having perforated and destroyed the temporal bone and the meninges (making a hole big enough to admit a five-franc piece), the neoplasm formed a hernia into the cranial cavity, in the form of a spherical tumour as large as a Tangerine orange. The whole petrous portion of the temporal bone was replaced by the new growth, and the sphenoidal lobe of the brain presented a depression corresponding to the intracranial tumour.

I agree with M. Delstanche that the point of origin of the tumour was the middle ear.

M. HENNEBERT. *Decortication of the Inferior Turbinate.*

A girl of seventeen years, suffering from general hypertrophic rhinitis, had been repeatedly treated locally, but without permanent effect. I seized the posterior end of the hypertrophied inferior turbinated with a cold snare, and forcibly tore out the whole mucous membrane from it. The piece thus removed measures $5\frac{1}{2}$ centimètres by 12 millimètres by 10 millimètres (average). The hæmorrhage was considerable, but easily stopped by an antero-posterior tampon of iodoform gauze. In a case treated the same way two years ago, the turbinateds are now covered with a normal, non-hypertrophic mucous membrane.

M. PAUL KOCH. *A Foreign Body in the Upper Air Passages.*

A boy, nine years old, was playing with his friends, with a bean in his mouth. Suddenly the bean disappeared, and the child had a violent attack of suffocation. When the doctor arrived, one hour later, the child was well and playing again. Auscultation gave negative results; it therefore seemed probable that the bean had been swallowed. This was on March 24th, at 9.30 a.m. The child remained well till the evening of the 25th, when fever, violent thirst, loss of appetite, and oppression over chest were complained of.

On 27th March the doctor, called in again, found the left half of thorax barely moving, dull all over on percussion; at left apex a very slight R.M., none over the rest of the lung. Right side of thorax normal. Tracheotomy proposed but refused. That evening another suffocative attack, during

which the foreign body could be felt moving up and down the trachea, and could be heard striking against the glottis.

On 30th March tracheotomy was performed. The wound, held open by retractors, permitted the bean to be coughed out. It was not at all decomposed, weighed 1·10 grammes, and measured 11 by 8 by 6 millimètres; therefore could not have been expectorated through the child's larynx.

It is unusual for a foreign body to enter the left bronchus.

As soon as the bean had been expectorated, the wound was united by a few sutures (no drainage) and a bandage round the neck. It healed by first intention.

M. LAMENT. *Temporary Resection of the Superior Maxillary in Extirpation of Naso-Pharyngeal Tumours.*

Temporary resection ought to be reserved for very large and specially for malignant tumours.

We have the choice of three routes—palatine, nasal, and facial.

The palatine route makes a laborious or even dangerous operation. There are three nasal methods (these were illustrated by preparations).

Of the facial operations, the chief are Langenbeck's (luxation of the maxillary inwards) and Fontan's (luxation outwards). Lastly, there is Kocher's subcutaneous resection of both maxillaries, which we consider the operation of the future.

MM. ROUSSEAU and HENNEBERT. *Antrectomy.*

After showing that nearly every author who has written on the operation of trephining the mastoid antrum has given some landmark as the only safe and reliable guide to the position of the antrum, the authors proceeded to demonstrate, on a large collection of temporal bones, that none of the guides were satisfactory.

The reason is very simple. All these landmarks are variable; each subject presents a temporal peculiar to himself, and not exactly resembling any other. Thus the temporal line, the squamo-petrous line, the spina supra-meatum, etc., were shown to be well marked, indistinctly indicated, or wanting, and to vary in size, position, etc. Now, considering how greatly the antrum may be reduced in size, for example, in sclerosed processes, it is indispensable to have at least one guide which shall be invariable in position and present in every case.

Having observed that the highest point of the spina supra-meatum (when present) and the highest point in the attachment of the membranous to the osseous meatus are always in the same horizontal plane, we concluded that the latter point must have some constant relation to the antrum, just as the spina has. To determine this we made a large number of sections of temporals, passing as exactly as possible through the middle of the tympanic cavity and antrum, then with a drill projected the outline of the antrum on to the external surface of the temporal bone; and we proved :—

(1) That a horizontal plane passing through the above-mentioned point of attachment passes through the floor of the aditus, and through the middle of the antrum,

(2) That the centre of the antrum is five millimètres behind the posterior wall of the osseous meatus. In other words: *a point five millimètres behind the posterior wall of the meatus, on a horizontal line drawn from the superior point of attachment of the membranous to the osseous meatus, corresponds exactly to the centre of the antrum.*

Therefore, having exposed the above-mentioned point of attachment, draw backwards from it a horizontal line, on this mark a point five millimètres behind the posterior wall of the osseous meatus; with this point as centre mark a circle of five millimètres radius; this is the "field of operation." A passage cut from this "field of operation" parallel to the osseous meatus will invariably reach the antrum. If the passage is cut perpendicular to the plane of the mastoid surface, it will almost certainly strike the lateral sinus. This is specially likely to happen in sclerosed processes, or in cases of malposition of the sinus.

In very young children, on account of the very small size of the field of operation, it is well to operate slightly in front of the above described position. In them, however, the removal of a very thin layer of bone opens the antrum. Except in sclerosed mastoids, after removing the first three or four millimètres of cortex, the antrum can be reached with the curette alone.

In cases with mastoid fistulæ we do not use these as guides to the antrum, but, starting from our landmark, work directly down to it, as already described.

The more serious operations on the ear are generally required for multiple lesions, located not only in the mastoid, but also and chiefly in the aditus, attic, and tympanic cavity. It is, therefore, necessary before proceeding to "antrectomy" to carry out some preliminary treatment—viz., extirpation of the membrane and ossicles and of polypi, curettage of the tympanum, etc., etc.

This should be done for two reasons:—(1) Operations in the tympanum are so delicate, requiring special illumination and special position of the patient, that they can hardly be satisfactorily carried out in the course of the larger and more serious mastoid operation. (2) This preliminary treatment will procure as thorough asepsis of the meatus and tympanum as possible. After this the results of the mastoid operation are most rapid and brilliant.

In carrying out the operations, an incision (right down to the bone) is to be made in the auriculo-mastoid groove, starting a little behind the ascending branch of the helix, following the groove to about its middle point, then continuing directly down to, but not beyond, the point of the mastoid process. The periosteum is then raised backwards very freely, and forwards as far as the meatus. The insertion of the cartilaginous into the osseous meatus must be freely exposed, both at the posterior and at the superior margins. In the latter position a strong fibrous band, about two to three millimètres broad, will be found. It arises from the depression above and behind the spina supra-meatum, and is lost in the membranous meatus. This must be cut through in order to expose the upper margin of the attachment of membranous to the osseous meatus, from which, as already described, our horizontal line is drawn.

The advantages of our landmark, as compared with all others, are that (1) it is exact ; (2) it is always present ; (3) it never varies.

RUTTEN. *Polyloid Growth on the Right Tonsil.*

This was a polypus, two and a half centimètres long, shaped like the uvula, growing from the surface of the right tonsil. There was no sign of suppuration past or present ; no cicatrices. The patient, aged twenty-six, discovered it by chance. He had suffered from time to time from slight sore throats. It was removed by galvano-cautery. No microscopical examination was made, but its naked-eye appearance, and the complete absence of secondary symptoms, such as pain or glandular swelling, led me to consider it a papilloma.

Afternoon Meeting.

Dr. BAYER was elected *President for the Year 1896-7.*

M. EEMAN. *Pseudo-Membranous Rhinitis and Nasal Diphtheria.*

Primary diphtheria of the nasal fossæ is comparatively common, at least amongst children. Clinical experience taught me to recognize as diphtheritic those cases commonly known as fibrinous or pseudo-membranous rhinitis. In my earlier cases no bacteriological examination was made, but since January, 1895, all my cases have been most carefully studied clinically and submitted to bacteriological examination in the laboratory of my learned colleague, M. van Ermengem, to whom, and to M. Sugg, I have to express my warmest thanks.

Eleven cases have been studied ; all were primary nasal diphtheria. Eight cases were pure diphtheria (long and short forms) ; in two there were Loeffler bacilli and strepto- and staphylococci ; in one, bacilli and diplococci. The age of the patients varied from seventeen months to eleven years. These were clinically the same as my previous cases, and, together with them, justify the assertion that fibrinous or pseudo-membranous rhinitis is nothing but primary diphtheria of the nose.

The history and surroundings of these affections very often indicate their diphtheritic nature. Thus, one case developed during a serious epidemic of diphtheria in a country district ; in a second, the little patient's brother had died a few months earlier from laryngeal diphtheria ; a third arose during a veritable home epidemic, three of my patient's brothers having suffered from pharyngo-laryngeal diphtheria ; in a fourth, my patient's mother travelled backward and forward between my patient and his brother, who had an attack of pharyngo-laryngeal diphtheria.

Post-operative fibrinous rhinitis is a secondary rhinitis of a completely different nature, and does not need to be considered here. Even this however, may not always be so simple as some suppose. Take, for example, the following : A child (on whom I had operated for purulent otitis media) suffered from nasal obstruction, due to a large polypus. One day the obstruction seemed more marked than usual. I examined

and found diphtheritic rhinitis of the right fossa (bacteriologically, pure diphtheria); two days later the left nasal fossa and the septum were invaded. This happened in June, 1895. Allowing a few weeks to elapse after the final disappearance of the membrane, I removed the polypus (September). Eight days later the patient returned with intense and widespread nasal diphtheria. This would naturally have been classified post-operative membranous rhinitis had one not known of the diphtheritic attack in June.

If the first microscopic examination gives a negative result, it must be repeated. For example, in Case 4 examination of the membranes gave a negative result, but examination of the secretions gave a positive result. Many of the cases recently published with negative results as regards diphtheria lose their importance because only one examination was made.

The disease is purely local, with the symptoms of an acute coryza, and not affecting the general health. Sometimes the symptoms are more like those of a foreign body in the nose, with muco-sanguinolent discharge.

It is this absence of effect on the general health that leads my confrères to doubt the diphtheritic nature of membranous rhinitis. But diphtheria of the pharynx can also be slight, with but little effect on the general condition. Do we not know latent diphtheria? Have we not sometimes to diagnose a past diphtheria from the presence of post-diphtheritic paralysis? This, which is only an occasional occurrence in diphtheria of the pharynx, etc., is the rule in nasal diphtheria. The disease remains local, but the germs are none the less virulent, as experiments on animals prove. The patients, therefore, able to go about their ordinary duties, are to be regarded as active agents in the spreading of diphtheria; and as such they must be treated not only till all trace of membrane has disappeared from the nose, but till repeated bacteriological investigations give constant negative results. Isolation and disinfection of all nasal discharges are the only methods to adopt.

M. BAYER thought that the rôle of the Loeffler bacillus was not yet established. There were certainly cases of non-diphtheritic membranous rhinitis; the diphtheritic cases, however, were the more numerous, but they accompanied or followed diphtheria of the pharynx, larynx, etc.; lastly, there were cases of latent diphtheritic pseudo-membranous rhinitis, generally remaining restricted to the nasal fossæ, but sometimes passing on to auto-infection. They are considered rare, because from their lack of serious symptoms they are not brought to the notice of rhinologists. As for prophylaxis, he thought M. Eeman was too severe. The child should be isolated from six to eight weeks.

M. DELSTANCHE had seen a good number of post-operative false membranes in the nose, and wondered how often Loeffler's bacillus might have been present. It would be interesting to examine the mucus from the noses of a large number of healthy children.

MM. WAGNIER and BECO thought the question deserved more thorough investigation.

M. BAYER, who had formerly seen many cases of post-operative membranous rhinitis, had not had a single case since he commenced to use antiseptics.

M. GEVAERT cited a case from his own practice in which he had seen fibrinous rhinitis in a child cause diphtheria in others. The child, in a hospital where the isolation of diphtheria is deplorably defective, developed fibrinous rhinitis. Three days later her mother took her home. Seven days later the mother came to the hospital with diphtheria, and four days later the grandmother followed with the same condition. M. Gevaert completely agreed with M. Eeman's propositions.

M. BUYS quoted a case of a child who had had fibrinous diphtheritic rhinitis seven weeks, attending school, etc., all the time. The bacilli cultivated from the nose were very virulent even at that time—*i.e.*, seven weeks from onset of the disease. At the present time, although there was nothing to complain of but a slight nasal catarrh, Loeffler's bacilli were present.

In reply to M. Beco, M. EEMAN said he had only once used serum-therapy for such a case. Its effect was marvellous.

M. BOLAND had to report favourably on two cases so treated.

M. NOQUET had seen very few of these cases. He thought it probable that one could frequently find the bacillus in apparently perfectly normal noses, just as one found it in the mouth of healthy people.

M. EEMAN replied.

Arthur J. Hutchison (Trans.).

(To be continued.)

DUTCH SOCIETY OF LARYNGOLOGY, RHINOLOGY, AND OTOTOLOGY.

Fourth Meeting, Utrecht, May 17th, 1896.

President—Prof. GUYE (Amsterdam).

Dr. HUYSMAN. *Case of Perforation of the Anterior Fauical Pillars.*

The patient, a man, aged twenty, had scarlatina as a child, and has chronic perforation of the tympanic membranes as a result. Nevertheless, Huysman considers the case as a congenital malformation on account of the symmetrical position of the oval perforations.

Dr. M. BOLT. *On Percussion of the Mastoid Process.*

In two cases of acute inflammation of the middle ear, where perforation of the tympanum did not follow spontaneously, Bolt found a dull tone on percussion of the mastoid process, and on that account suggested mastoid operation, which was not permitted. After paracentesis of the tympanum both cases healed completely.

Dr. GUYE. *Demonstration of a Case of Radical Operation for Cholesteatoma.*

The patient, a schoolmaster, thirty-nine years old, had been operated on by Guye twenty years ago—in 1875—on account of purulent otitis, with polypi and abscess on the mastoid process. He saw him again in 1888,

thirteen years after the first treatment. He had been well for six years, but since that time he had suffered from headache and neurasthenia, and had twice been under hydropathic treatment without benefit. Now he had again otorrhœa and earache. Some granulations were removed, and also foetid caseous pus from the tympanum and antrum, and the tympanum syringed out from the Eustachian tube. This was repeated a few times; after which the patient was quite well for a year. He returned in 1889, and in 1890, with a slight recurrence. From 1890 to 1896 the patient was quite well, syringed his ear once a month with a one per cent. sublimate solution, without having any otorrhœa or earache all that time. On March 21st of this year he again returned with earache and otorrhœa.

Guye removed a quantity of epidermoid substance, and found in the posterior wall of the meatus a perforation from which also a mass of epidermis was removed. Three weeks later, on April 6th, the patient returned. He had had influenza, and after that earache and otorrhœa, and swelling behind the ear. On April 18th there was an abscess above the meatus. Next day Guye operated, and found a large antrum filled with pus and cholesteatoma. When this was removed one could see the air coming through the aditus and antrum as the patient performed Valsalva's experiment. Guye resolved to keep a permanent opening of the antrum, and to this effect he inserted, two days after the operation, a caoutchouc tube into the antrum, twelve millimètres thick and three centimètres in length, cut so that it rested with two points on the posterior wall of the antrum; and, besides that, he passed a piece of iodoform gauze through the posterior wall of the meatus, and through the wound, intending by this means to keep open the perforation of the posterior wall of the meatus, which had been enlarged during the operation. The drain has had to be shortened since the operation; it measures now two centimètres. The patient is still able to blow the air freely both through the antrum and through the ear. Guye's aim is to see the canal coated with epidermis, which will take a couple of months; after which time he will replace the tube by iodoform gauze, and keep the canal as dry as possible. Guye showed to the Society four years ago a patient on whom he had operated by the same method, and this patient has now had for eight years these two permanent perforations—one into the posterior wall of the meatus, and one in the mastoid opposite the antrum. During these eight years this patient has made no complaints at all about his ear; he only now and then wishes to have the opening closed—a wish which, of course, will not be fulfilled, because it would sooner or later bring about a renewal of the previous condition.

Dr. MOLL: Why not prevent the closing of the opening by a plastic operation?

Dr. GUYE: I am very satisfied with the result of the drain.

Dr. BOLT: I cannot approve of the daily syringing, as the aim is to get the canal dry.

Dr. GUYE: Syringing is the only way for the patient to keep the canal clean. Of course, it is only kept wet for a short time.

Dr. BRAAT: In the depth of the wound there are still granulations.

Dr. GUYE : The operation was made only four weeks ago. The patient is not quite cured yet.

Dr. REINHARD : I am glad to see that you also make a permanent opening in the antrum for cholesteatoma. Even after doing this one sometimes sees a relapse, but far less often than formerly.

Dr. MOLL. *Demonstration of a Case of Trephining of the Mastoid Process.*

This case was that of a man of thirty who had had otorrhœa in his youth, and had suffered now for two years from intense headache. He had a slight otorrhœa, with swelling and tenderness of the meatus and mastoid process. An incision had been made in the meatus without result. Moll opened the antrum with gouge and mallet, removed a quantity of caseous matter, and tried to keep the wound open and to cover it with epidermis by transplantation. There was still in the depth of the wound a bony bridge under which one could pass a sound. It looked like a semicircular canal, but neither Dr. Moll nor any of the present members thought it probable that it was. Result : No more headache and the general condition of the patient very satisfactory.

Dr. REINHARD (Duisburg). *Demonstration of a Patient with a Deep Abscess in the Neck after Otitis Media Purulenta.*

This was a case of a deep abscess in the neck as a sequel of otitis media purulenta. It was remarkable that the otitis was healed before the abscess developed. Reinhard opened the mastoid on March 28th, and removed a fair quantity of non-fœtid pus. He had to open the abscess again on April 23rd and on May 11th. Even now the abscess is not healed, and the infiltration in the neighbourhood is still very hard.

Dr. TEN SIETHOFF asked if the pus had been examined microscopically. The hard infiltration makes him suspect that it may be a case of actinomycosis. He relates a case seen by him a year ago, where there was otorrhœa and hard painful swelling around the mastoid process. He found actinomyces in the pus, and gave iodide of potassium (two grammes every day) internally, with the result that after four weeks the patient was cured with practically no local treatment.

During the course of the meeting Dr. Ten Siethoff, with the permission of Dr. Reinhard, examined microscopically some of the pus, and demonstrated to the members the characteristic elements of actinomycosis.

Dr. W. VAN DER HEIDE. *Demonstration of Polypi of the Choanæ, and of some Foreign Bodies removed from the Nose.*

Van der Heide showed four large polypi removed from the choanæ by the cold snare. One of them was a cysto-fibroma. Three were removed through the nose ; one, on account of division of the pedicle, by the mouth. He also showed a revolver bullet which had been shot by a man attempting suicide through the inner corner of the eye. No trace of the bullet was found in the wound, nor in an abscess which formed there. After a few weeks the left nostril was found blocked up with fœtid discharge. Between the middle turbinated and the septum Van der

Heide found resistance on probing. He then with a curved forceps removed the bullet, which was very disfigured. A few days after that he removed a piece of bone, and the patient recovered.

He then showed a *myriapod* which had crept into the nose of a boy of eight years when sleeping in a wood. The boy had severe headache and pricking sensations in the nose. Van der Heide removed adenoids, and a week after that the patient returned and brought a conglomeration of mucus, which he had removed by injections into the nose, and which was making very lively movements. In washing this mucus Van der Heide found a myriapod, which was verified by a zoologist, Dr. P. P. C. Hoek, as a specimen of *Arthronomalus similis*.

Dr. A. SIKKEL. *Demonstration of Plaster Casts of the Upper Jaw in Patients with Adenoids.*

These casts show the peculiar changes described in 1891 by Körner, and which, according to Sikkel, are not the same when the nasal obstruction has set in during the first and during the second dentition. In the first case the hard palate is found very high; the upper jaw is narrow and long. In the second instance these changes are more prominent still, and, besides this, the central incisors stand at an angle and turn their lingual plane towards each other. The lateral incisors also suffer under the nasal obstruction; sometimes one is found malformed and the other is absent. It is desirable that dentists should pay attention to the fact that often the irregular growth of the teeth is the result of changes in the upper jaw produced by nasal obstruction.

Dr. HUYSMAN. *On the Treatment of Otitis Media Serosa and Purulenta.*

Huysman recalls the fact that he has advocated the dry treatment of middle-ear disease since 1891. The bacteriological and other experiences published since by Gradenigo and others have confirmed his views. He believes that some mastoid complications are caused by the treatment.

MOLL acts on the same principles in acute cases. In chronic cases he does not think that it is always sufficient.

Dr. VAN DER HEIDE is of opinion that the dry treatment may be sufficient in a clinic, but in a polyclinic, or in cases where you cannot see the patient regularly, you cannot do without irrigations.

Prof. PEL: The same question about dry treatment rises after operation of empyema of the thorax. Formerly it was usual to irrigate the pleural cavity, but often fever and complications followed. With the dry treatment the results are much better. The analogy, therefore, would plead for dry treatment of middle ear inflammation.

Dr. ZWAARDEMAKER observed that the two cases are not the same. We do not irrigate the tympanum, only the meatus—which would be analogous to keeping clean the neighbourhood of the wound in the thorax.

Dr. SIKKEL cannot do without the syringe. In the dry treatment some pus must often be left in the depth of the meatus.

Dr. BURGER and Dr. GUYE expressed much the same opinion.

Dr. H. BURGER. *A Case of Radical Operation with persistent Opening for Cholesteatoma.*

The patient, a man of twenty-seven years, came under treatment four years ago with an old fetid right otorrhœa, which had lasted since his thirteenth year, and he also suffered with much giddiness and headache. A quantity of cholesteatomatous matter was removed. Part of the upper and posterior wall of the meatus was gone. This opening led to a large cavity in the mastoid, from which also fetid matter was removed. The giddiness and headache disappearing, the patient left off the treatment. Three years later, in December, 1895, he returned. He had been well for more than two years, and now for half a year again suffered from giddiness and headache. Once he had an attack with lipothymia, diplopia, and convulsions. On December 24th he was operated on, the rest of the bony posterior wall of the meatus was removed, and the wound was coated by a plastic operation, after the method of Stacke-Jansen. On March 5th the whole wound was coated with epidermis, and there was no trace of secretion. The general health was very good, and the patient said his memory, which had been feeble for the last years, was much better. Hearing power for whispered voice had improved from 0.50 mètre to 2.50 mètres.

Dr. REINHARD : I think the fact that the Eustachian tube is quite closed very remarkable. I hear from Dr. Burger that this has not been obtained on purpose. I have often tried in the operation to bring about that closing of the tube by curettement, or by cauterization, but always without success. I consider it to be a very happy circumstance.

Prof. GUYE : In my opinion it is better that the Eustachian tube remains open, in view of the normal ventilation of the tympanum.

Dr. BURGER : I consider, with Dr. Reinhard, the closure as an advantage, principally in cases of cholesteatoma, where often a relapse is occasioned by infection through the Eustachian tube. The ventilation through the tube has no importance after a radical operation, where the tympanic membrane and the posterior wall of the meatus are removed.

Dr. H. VAN ANROOY. *A Papilloma of the Larynx, discovered by means of Kirstein's Autoscope.*

The case was that of a child, three years of age, which, after having had measles and whooping cough, had become hoarse and dyspnœic. As laryngoscopic examination was very difficult to perform, Van Anrooy tried the autoscope of Kirstein in narcosis, and was able to find large multiple papillomata in connection with the right vocal cord. The growths were removed on April 29th, by Dr. van der Hoeven, by means of laryngofissure, as Dr. van Anrooy did not think this a fit case for endo-laryngeal operation. He was well satisfied with the aid to the diagnosis given him by the autoscope of Kirstein.

Dr. Anrooy also showed a hard round wood splinter of two centimètres in length, which he removed with Mackenzie's forceps from a larynx, where it was impacted beneath the left vocal cord, between the regio interarytenoidea and the lateral wall of the larynx. By traction

with the forceps the splinter was broken, took the form of a V, and was then easily extracted.

Dr. ZWAARDEMAKER. *Paracusis Willisii.*

After a critical review of the various interpretations of this symptom, Dr. Zwaardemaker, in analyzing the symptom itself, comes to the conclusion that in these patients the absolute perception of sounds is diminished, but the relative or differential perception is as good or even better than normal. He has made experiments in this direction by means of the harmonica of Urbantschitsch, and has found his hypothesis confirmed. He intends to publish his experiences separately.

Dr. BOLT. *On Treatment of Chronic Purulent Middle Ear Disease, with high-placed Perforations, by Styron.*

Dr. Bolt has made a trial with styron, as recommended by Spalden some time ago. Styron is composed of styrax and balsam Peruv. aa. He makes use of an alcoholic solution containing five per cent. of styron, and has seen very good results from its use.

Dr. BRONDGEEST. *On the Surgical Treatment of Lupus and Tuberculosis of the Larynx.*

As a sequel to his formerly published cases, he related two new cases of far-advanced secondary lupus of the larynx, in which surgical treatment, laryngotomy, extirpation of the epiglottis after pharyngotomy, and destruction of the lupous or tuberculous tissue by the thermo-cautery, was applied. One of the cases was cured; in the other the larynx was getting on very well, but the patient died of acute pulmonary tuberculosis.

Guye.

VIENNA SOCIETY OF LARYNGOLOGY.

January 9th, 1896.

President—Prof. STOERK.

SCHEFF. *Fracture of the Laryngeal Cartilage, and Presentation of a Specimen.*

Isolated fractures of the cricoid cartilage are rare. Specimen shown was from a healthy man, aged twenty-four, who had received a blow on the neck. The face, the neck, the upper limbs as far as the articulations of the hands, and the trunk down to the scrotum, were infiltrated with air in the subcutaneous cellular tissue. Respiration was very embarrassed, air penetrating under the skin at each expiration. There was no time to lose, and after various unsuccessful attempts to introduce a catheter, the author decided to open the air passages. The patient succumbed. At the autopsy a fracture of the cricoid cartilage was recognized.

Scheff then proceeded to make a communication based on experiments made on twenty cadavers. Reviewing the literature of the subject, he referred to cutaneous emphysema as the most marked symptom.

Crepitation cannot be considered characteristic, for it may be produced from the lateral inclination of the normal larynx by the friction of the superior cornua of the thyroid cartilage, and the great cornu of the hyoid bone over the cervical column. Having explained his experiment in detail, Scheff, in conclusion, stated that his results agreed with those of Cavasse, Keiller, and Gurlt, in so far that fractures of thyroid are more frequent than those of the cricoid cartilage, and that the latter are rarely isolated, being oftenest associated with fractures of the thyroid. Both the author and other experimenters have observed that the arytenoid cartilages, and especially the vocal cords, may participate in laryngeal traumatism. Age, that is, the degree of ossification, influences fracture of the larynx. Sometimes the ossified cartilages of middle age are fractured more easily than the non-ossified cartilages of youth. The greatest resistance is offered by cartilages entirely ossified, such as are found commonly in aged people.

STOERK remarked that in most cases of laryngeal fracture crepitation is but little discernible, in consequence of the pronounced tumefaction of the soft parts, and it cannot, therefore, be regarded as a symptom of importance.

HAJEK related a case of descending fracture of the thyroid cartilage to the right of the thyroid angle. Apart from cough the patient ejected a few drops of blood, and suffered from nothing except hoarseness, so that he sought advice only four weeks after the accident. The fracture was easily detected; the right vocal cord was thickened at its anterior extremity. It is rare to observe a fracture of the laryngeal cartilages so painless.

Hajek replied to Stoerk that in his case crepitation was clearly perceived. There also existed the signs indicated by Stoerk, absorption of the hæmorrhagic infiltration subsequent to the fracture; moreover, the thyroid cartilage was partly ossified.

WEIL showed a woman, twenty-four years of age, who since March, 1895, had suffered from *Fætid Suppuration of the Right Antrum of Highmore*, consequent upon influenza. On the 8th December, after electric transillumination had furnished a positive result, irrigations were made through the inferior meatus, which gave issue to masses of fætid caseous pus. Subsequently, every-day irrigation was practised through the maxillary sinus. The fifth application was followed by the issue of a plug of muco-pus. The seventh was followed by a little clear pus, and then nothing more. There was also extensive caries of the superior first molar, and a fistula, which scarcely suppurred again after cleansing of the dentary canal and filling of the tooth. Weil reserved his remarks upon the surprising rapidity of this cure. *R. N. Wolfenden (Trans.).*

BERLIN LARYNGOLOGICAL SOCIETY.

Meeting, November 8th, 1895. (Reported by Dr. EDMUND MEYER.)

DEMME showed :—(1) A patient with a *Deep Furrow in the Left Tonsil*. (2) A boy, aged thirteen, with *Paralysis of the Left Recurrent* resulting from a fall on a pail. Demme considered the paralysis due to the pressure caused by an extravasation of blood (there was a slight thickening over the cricoid), and, therefore, employed massage, which effected an improvement.

GLUCK has performed *Laryngotomy* fifteen times for tumours. The cases of papilloma were cured without exception. Of two sarcomas, one was cured, while the canula cannot be removed from the other. One case of carcinoma was cured. Of two in which tracheotomy was performed, one died five weeks afterwards of inanition.

B. FRANKEL saw papillomata recur very soon in the case of a child in whom laryngotomy had been performed, the growths leading to complete stenosis of the larynx. Fränkel attributes pneumonia after extirpation of the larynx to injury to the superior laryngeal nerve.

P. HEYMANN has also seen recurrence of papillomata after laryngotomy.

ALEXANDER demonstrated a patient with a *Sarcoma of the Base of the Skull*, which filled the right half of the naso-pharynx, and had caused paralysis of the facial and paresis of the soft palate on the right side. After being three weeks under observation, the surgeon having declined to operate, the patient was put on arsenic. Under this treatment all the symptoms quickly improved.

P. HEYMANN reported a similar case.

SCHÖTZ saw no success follow the use of arsenic in three cases.

B. FRANKEL emphasized the fact that one can never know beforehand whether the arsenic will be effectual. In two cases he saw a brilliant result follow the arsenic treatment.

GLUCK also referred to two cases successfully treated by arsenic.

E. MEYER showed two tubes containing *Serous Fluid Aspirated from the Antrum of Highmore*. On opening the cavity it was found empty; from the wall hung shreds of mucous membrane, which probably represented a collapsed cyst.

E. MEYER. *Bacteriological Examination of Angina Lacunaris*. In the examination of the secretion of non-inflamed tonsils Meyer usually found a coccus very similar to the streptococcus pyogenes, a smaller micro-organism, often arranged as a diplococcus, staphylococci, and leptothrix. In angina, in addition to these, pathogenic bacteria were also found. In fifty-five cases examined, staphylococci—usually staphylococcus aureus—were found in fourteen; staphylococci and streptococci were mixed in twenty-four; and in fifteen cases there was a pure culture of streptococcus. Meyer regards the latter as the exciting cause of the angina. Its absence in so many cases is explained by its sensitiveness to the reaction of the nutrient medium. After he used agar, which had proved suitable for

streptococci, their growth never failed. If, in the first hours of an angina, only staphylococci are found, this may be due to the immigration of the streptococci into the mucous membrane and to the more rapid growth of the staphylococci. Meyer could not make out any difference between the course of streptococcal and staphylococcal angina. He found no pneumococci in the latter, although diplococci were frequently observed. Loeffler's diphtheria bacillus, in its full virulence, was present on two occasions.

Meeting, 29th November, 1895.

B. FRANKEL showed (1) Preparation of a *Carcinoma of the Anterior Wall of the Pharynx*, extending to the thyroid cartilage, and involving the muscles. (2) Preparation of the larynx from a patient aged forty. The left vocal cord was in the cadaveric position; the recurrent paralysis was primarily attributed to a struma. The latter became smaller under thyroidin treatment, although difficulty in swallowing set in. Some time later a prominence appeared beneath the left vocal cord, which was covered by normal mucous membrane. Death from cachexia. The *post-mortem* examination revealed a carcinoma of the upper part of the oesophagus, which had caused a perichondritis of the cricoid cartilage.

P. HEYMANN reported two cases in which the arsenic treatment had exercised a beneficial influence on *Sarcomas*. (1) Man, who for several years had had increasing difficulty in swallowing. Tonsils greatly enlarged. Microscopically, small-celled sarcoma. (2) Eight years ago pain on swallowing. Removal of a tumour from the pharynx. Since then, recurrence every autumn, and removal by operation. Three years ago pharyngotomy (Von Bergmann) for recurrence. Two years later recurrence involving the whole left half of the pharynx. Under arsenic the tumour diminished. In three other cases, Heymann obtained an improvement by arsenic, while in five or six cases it failed.

TREITEL demonstrated a *Modified Ring Knife for Operating on Adenoid Vegetations*.

FLATAU condemned the instrument because of the ease with which it might cause injury.

E. MEYER showed *Microscopical Preparations* from the case reported at the last meeting, in which serous fluid was removed from the antrum. The examination showed a cystic mucous polypus.

E. MEYER. *Autoscopy and Oesophagoscopy*. Meyer gave his opinion as to the value of Kirstein's autoscopy from his experience in three hundred cases. In 8·3 per cent. he obtained a complete view of the larynx and trachea, in 10 per cent. the larynx, excepting the anterior commissure, in 22 per cent. the posterior two-thirds of the larynx, in 10·3 per cent. the posterior half, in 8·3 per cent. the posterior wall of the larynx, in 17·6 per cent. the summit of the arytenoid, and in 13·6 per cent. autoscopy was not practicable. Women appear to be somewhat more suited for the method than men; the age is of no importance. The contra-indications

are : hyperæsthesia of the base of the tongue, or ulcerative processes in this region, grave disturbances of the circulation, and marked tracheal and laryngeal stenosis. Further, the method is not available for the diagnosis of the motor disturbances of the vocal cord. The complaints of the patients varied, the pressure of the autoscope was usually felt to be exceedingly annoying, and sometimes even painful. Meyer found that autoscopy was of considerable advantage in the examination of the posterior wall of the larynx and trachea, but he did not think that it facilitated endolaryngeal operations much ; only operative measures on the posterior wall of the larynx were more easily carried out. For demonstration purposes he could not find autoscopy of any special value.

Rosenheim's œsophagoscopy is practicable in all cases. By this method the œsophagus, which has hitherto been hidden from our view, is made accessible to direct examination and local treatment.

KIRSTEIN did not find it necessary to use any force in practising autoscopy. He regarded the autoscope, not as indispensable, but as possessing considerable advantages. The method marked an advance, especially in endolaryngeal and endotracheal surgery.

E. MEYER did not see wherein the operative technique was simplified by autoscopy.

TH. FLATAU. *Rhinological Communications.* (1) Girl, aged five, suffered for a long time from nasal obstruction, which persisted in spite of the removal of adenoid vegetations. The examination showed the remains of adenoids ; in both nasal cavities œdematous masses, granulations, and fœtid pus. On probing, there was the feeling of bare bone. After removal of the granulations a foreign body was seen which had perforated the septum. The calculus, which had formed around a fruit stone, consisted of phosphate of calcium, traces of oxide of iron, and carbonate of magnesia. (2) In the treatment of empyema of the antrum of Highmore, Flatau recommends the opening to be made from the canine fossa with a punch-like chisel. He does not prolong the use of tampons, but drains the cavity by means of an aural speculum slit in the middle.

Meeting, 20th December, 1895.

FLATAU demonstrated a patient in whom an *Empyema of the Antrum of Highmore* had produced vertigo, partial loss of memory, ill-temper, lancinating pains in the left arm, foul-smelling nasal suppuration, and necrosis of the lateral wall of the nose. After opening the antrum, and curetting it, all the symptoms passed off.

KUTTNER thought that syphilis must be regarded as the cause of the affection, because of the severity of the general symptoms—the pains in the left arm—and chiefly on account of the formation of a sequestrum.

FLATAU once saw a similar sequestrum form in influenza, without syphilis.

E. MEYER showed a patient, a view of whose larynx could be obtained with extraordinary ease by simply depressing the tongue. He mentioned,

also, that in a patient in whom laryngoscopy presented great difficulties on account of the very fleshy tongue, autoscapy yielded a good view of the larynx.

G. LEWIN demonstrated (1) a patient who contracted syphilis four years ago, and now presented an *Ulceration with Grape-like Escrescences at the Point of the Tongue* which Lewin did not regard as specific.

LANDGRAF was inclined to look upon the process as a syphilitic ulcer surrounded by granulations.

LEWIN found the tumour formation so considerable that he would not care to attribute it to the ulcer. The microscopic examination would settle the matter. (2) *Syphilitic Patient with Swollen and Echylosed Vocal Cord*, on which a small tumour was seated anteriorly. Lewin regarded the growth as a syphilitic nodule.

LANDGRAF asked whether he had not to deal with a gumma.

SCHÖTZ thought that the redness was not so much due to the tumour as to mechanical irritation (cough, etc.). The tumour appeared to him to be a cyst.

LEWIN was of the opinion that a cyst would be more translucent; besides, the tumour had diminished under antisyphilitic treatment. (3) *Patient with Slight Atrophy of the Base of the Tongue*, and *Patient with Gummatous Infiltration of the Epiglottis*.

B. FRANKEL pointed out that the last patient presented the rolling forward of the epiglottis which Hansemann has described as characteristic of syphilis.

E. MEYER showed the *Larynx and Trachea* of the patient he had demonstrated in the Society on 15th July, 1892. There was compression and rotation of the trachea by a struma which had grown into the latter. The *post-mortem* examination of the patient, who died of suffocation on 20th December, 1895, showed:—The upper part of the trachea deviated to the left; on its right wall a strumous nodule, which has perforated the wall, and is visible in the lumen as a tumour the breadth of the thumb. By a nodule on the left side, at the same height, the trachea is so compressed from the left, also, that almost no lumen remains. In addition, several fluctuating nodules are seated on the trachea. Microscopic sections prove that the growth is benign. An operation was not advised by the surgeon, as the struma descended far behind the sternum.

A. B. Kelly (Trans.).

(To be continued.)

ABSTRACTS.

DIPHTHERIA, &C.

Report of the American Pediatric Society's Collective Investigation into the Use of Antitoxin in the Treatment of Diphtheria in Private Practice. "Med. Record," July 4, 1896.

A CIRCULAR-LETTER was issued by the above society to practitioners in North America, asking for detailed information as to the use of antitoxin in diphtheria in private practice. Replies were received from 615 physicians (with 3628 cases) in fifteen different states, in the district of Columbia, and in Canada. In making up the statistics and report certain cases were neglected, because the diagnosis for various reasons seemed doubtful. Reports of private cases were also obtained from the Boards of Health of New York and Chicago. The grand total gives 5794 cases, with 713 deaths—a mortality of 12·3 per cent. If cases moribund or dying within twenty-four hours of the first injection are deducted, the mortality is reduced to 8·8 per cent. The advantages of early injection are very strikingly demonstrated, thus :—

PERCENTAGE MORTALITY.

	Injected on 1st day.	2nd day.	3rd day.	4th day.	5th day, or after.
Committee's Report ...	4·9 ...	8·3 ...	12·7 ...	22·9 ...	38·9
New York Health Board	8·7 ...	12·0 ...	16·6 ...	20·9 ...	29·0
Chicago	0·0 ...	1·5 ...	2·7 ...	14·1 ...	34·0

Thus the mortality per cent. of all cases injected during the first three days was only 7·3; deducting those moribund, or that died within twenty-four hours from the first injection, the mortality is 4·8 per cent.

The age table is much in accordance with ordinary experience, showing that the danger decreases with advancing age. Over fifteen years old there were 359 cases, with only thirteen deaths. The majority of these were either septic cases, or had already cardiac or kidney lesions. Omitting four moribund cases, the percentage mortality is reduced to 2·5.

It is difficult to judge from the returns what influence (if any) antitoxin has in preventing paralytic sequelæ. If it has any such effect, it is only when given at the very onset of the disease.

With regard to sepsis and nephritis the reports are unsatisfactory, different men calling different conditions by the same name; but there is very little evidence to show that nephritis was caused in any case by the serum.

Broncho-pneumonia occurred in only 5·9 per cent. of the cases.

Of laryngeal cases, one-half recovered without operation, although in a large proportion the stenosis was severe; and in cases intubated the mortality was only 25·9 per cent.

Only three cases are reported in which unfavourable symptoms were attributed to the serum, and of these only one (viz., the girl Valentine, who died in convulsions ten minutes after receiving the injection) is clearly proved to be due to the serum.

Arthur J. Hutchison.

Diphtheria Treated with and without Antitoxin. "Med. Record," June 30, 1896.

FIVE papers on the antitoxin treatment of diphtheria :—

1. **Winters, Joseph E.**—*Clinical Observations upon the Use of Antitoxin in Diphtheria ; and a Report of a Personal Investigation of this Treatment in the Principal Fever Hospitals of Europe during the Summer of 1895.*
2. **Thomson, W. H.**—*How the Facts about the Antitoxin Treatment of Diphtheria should be Estimated.*
3. **Brannan, John Winters.**—*A Critical Analysis of Dr. Winters' Clinical Observations on the Antitoxin Treatment of Diphtheria.*
4. **Stowell, W. L.**—*Diphtheria with and without Antitoxin.*
5. **Ernst, F. H.**—*Personal Experience in the Treatment of Diphtheria with and without Antitoxin.*

The first of these papers is a violent attack on the use of antitoxin on both theoretical and statistical grounds.

The bacillus is not destroyed, is not rendered less virulent, is in no way affected by the antitoxin. Antitoxin is supposed to be an antidote to the bacillary toxins, but to have no influence on the toxins of other bacteria ; thus its scope is at once greatly restricted because pure bacillary infection is rare. The duty of the antitoxin is or ought to be to prevent cardiac depression, cardiac paralysis, albuminuria, and post-diphtheritic paralysis, all of which are due to the toxins of Loeffler's bacillus. Has it done so? Behring states that to obtain the maximum result the antitoxin should be applied at the same time and at the same spot (Kuffer) as the toxin. This is impossible in man. "Another consideration of prime importance is : if we are to attribute the reported decrease of mortality of diphtheria to the action of a specific, this decrease must be uniform and constant. There must be the same reduction of mortality in all parts of the world where the remedy is applied.

"The most misleading part of antitoxin literature is the constantly quoted percentage mortality. The mortality from diphtheria in the city of Boston in 1895 was 14·48 per cent. ; in 1893, 32·49 per cent. ; and yet there were one hundred and twelve more deaths from diphtheria in the city of Boston in 1895 than there were in 1893."

The author next proceeds to deal with the results obtained at the Willard Parker Hospital during the first nine months of 1895, quoting shortly cases in which the treatment was begun early in the disease, and summing up thus :— "Not one item in the clinical records can be found to indicate that any one of these patients was in any way benefited by the antitoxin. This is particularly noticeable in the laryngeal cases. . . . There are clinical features here recorded which are due to the treatment, and not to the disease. These features are referable to the kidneys, nervous centres, temperature, and respiratory organs."

The next part of the paper is devoted to the injurious effects of antitoxin, used either as a curative or prophylactic agent, large numbers of cases (both from hospital and private practice) being quoted in support of the author's opinion that antitoxin is utterly bad.

The popularity of antitoxin is due largely to the results obtained at the Empress Frederika Hospital (Baginsky), Berlin, and at the Hospital for Sick Children in Paris (Roux and Martin). The methods of obtaining these results do not stand close investigation. Then, probably, we have just been passing through a period of mild diphtheria, and certainly "include many cases which previously (*i.e.*, before bacteriological diagnosis) were not considered as cases of diphtheria,"

Dr. P. H. Ernst treated seventy-seven cases of diphtheria since May, 1895; twelve with and sixty-five without antitoxin. Of the twelve treated with antitoxin, five recovered, seven died. Mortality, over fifty-eight per cent. Of those treated without antitoxin, eleven died. Mortality, seventeen per cent.

The author concludes thus:—"When I began the use of antitoxin I had "implicit faith in its remedial effects, but careful observation of the cases just "enumerated convinced me that antitoxin does not exert the slightest favourable "influence on the course of diphtheria. In fact, it is my opinion that the antitoxin "patients who recovered had a more protracted convalescence, the anæmia "specially being more marked and less amenable to treatment than in those who "recovered without antitoxin."

Dr. William L. Stowell's paper, a review of his own cases and partly of the literature of the same period, is also unfavourable to antitoxin. He is convinced—

"That diphtheria is very variable in extent and severity, both epidemically and clinically.

"That the diagnosis of true or false diphtheria requires as much care bacteriologically as clinically.

"That the unusual number of cases recorded is in part due to bacterial cases "without symptoms and the general alertness of physicians now to report "suspicious cases.

"That the same causes, plus elimination, give the apparently low ratio of "deaths." (This refers to the fact that many physicians use antitoxin for mild and moderate cases of diphtheria, but refuse it to very severe or moribund cases.)

"That cleanliness and ventilation will immunize as well as hypodermic serum.

"Diphtheria is a treacherous disease under any treatment. Selected cases "and faithful treatment of any reasonable kind lead to success. Jules Simon was "correct in saying, 'Efficiency of remedy not only, but fidelity in its use, give "results.'"

Dr. W. H. Thomson's paper, after dealing with the difficulties and grounds for doubt in forming an opinion as to the value of antitoxin, shows that no individual's experience or opinions, however loudly he may express them—nothing but the experience of the whole of the medical profession throughout the world—should influence us in favour of or against antitoxin. From the published hospital statistics of practically the whole civilized world he proves quite clearly (as clearly as the above quoted papers disprove it) that antitoxin is the best treatment yet devised for diphtheria. He does not claim that antitoxin is a specific, because "there are no specifics;" but antitoxin treatment of diphtheria has reduced the death rate, so far as hospital experience goes, by fully fifty per cent.

J. W. Brannan's paper is a reply to that of Dr. Winters', first analysing, and in most cases proving the incorrectness and misleading nature of, his statements with regard to the Willard Parker Hospital results, then showing up the one-sided nature of his personal European investigation.

Dr. Winters, in citing cases from the hospital, uses a formula somewhat as follows:—"Patient, M. C.; one day sick; small bit of membrane on the tonsil; favourable prognosis; antitoxin injected; death on the fourteenth day." It ought to have been: "M. C., two years old; two days sick. No membrane visible, marked croup, retraction of chest, cyanosis. Intubation required. Prognosis doubtful. Antitoxin injected. Death on fourteenth day. Broncho-pneumonia on autopsy," etc.

One case—"J. L., thirty-two years old; three days sick; intoxicated on admission, with marked tremor"—is cited to show a type of case in which antitoxin should not be used,

"Dr. Winters insists that we should study the fatal cases, not those that result in recovery. Therefore he has not told you that for every eight first-day cases that died, ninety-two recovered; for every twenty-four second-day cases that died, seventy-six recovered; for every twenty-seven third-day cases that died, seventy-three recovered."

Dr. Brannan shows from the hospital books that with antitoxin less alcohol is used per head than before antitoxin was introduced, contrary to the statement of Dr. Winters. The broncho-pneumonia observed has been of the usual type: suppression of urine has occurred with about the usual frequency, and has generally been relieved by local applications and diuretics. Albuminuria has been observed more frequently; but the urine has been more carefully and systematically examined. Cardiac weakness has not been more frequent, and post-diphtheritic paralysis (excepting temporary paresis of the palatal muscles) has been noteworthy by its absence.

The rest of Dr. Winters' evidence is similarly disposed of, special stress being laid on the complete absence of *post-mortem* findings in his reports.

As for his European investigation, it is shown that his authorities are either recognized opponents of antitoxin, or young men who never had any experience of diphtheria in pre-antitoxin days, and whose opinions are therefore of little or no value.

Arthur J. Hutchison.

Coakley, C. G.—*Statistics of Diphtheria*. "Med. Record," June 6, 1896.

THIS is an examination (with tables) of the diphtheria statistics of Boston, New York, and Brooklyn from 1880 to 1895, also of those of the Boston City Hospital and the Willard Parker Hospital, with a view to estimating the value of the antitoxin treatment. Two sources of error have to be allowed for in treating municipal statistics. (1) The neglect to report cases. The busy practitioner will generally report his severe, and specially his fatal, cases, but will often forget to report the mild cases. (2) The variation in character or type of the disease from year to year.

A very marked increase in the number of cases reported took place in each of the three cities in the year in which these cities provided public laboratories for bacteriological investigation of the cases.

Contrasting "percentage mortality" with "number dying per 10,000 inhabitants" in Boston some interesting discrepancies appear. Thus, between 1886 and 1887 there occurred a rise of 2.5 in percentage, but a fall of 0.5 dying per 10,000 inhabitants; again, between 1888 and 1889 a fall of over two in percentage, with a rise of nearly two dying per 10,000 inhabitants; again between 1893 and 1894 a fall in percentage of nearly 5.5 and a rise of 6.7 dying per 10,000 inhabitants. The introduction of bacteriological examination of cultures from the throat, begun in 1894, was the means of discovering many mild cases, and thus increasing the total of cases; and as the patients in these cases mostly recovered the death rate was reduced. In 1895, when antitoxin treatment was used, there was a further very marked fall in the percentage mortality—12.5 of a fall, accompanied by a fall of about five in the number dying per 10,000 inhabitants. Such sudden falls in the number dying per 10,000 have occurred several times in other years, so that one cannot right away give the credit for this reduction to antitoxin. The percentage mortality for 1895 is phenomenally low—about half what it used to be—but in ten out of the sixteen years recorded the number dying per 10,000 inhabitants has been lower than in 1895. Similar results are obtained from the other tables. The conditions in the bacteriological and the pre-bacteriological periods are so different "that any comparison of the death-rate of the one period

"with the death rate of the other period will be apt to lead one to erroneous conclusions."

Arthur J. Hutchison.

Glaser (Hamburg).—*Reports on Twenty Years' Diphtheria in the Hamburger Allgemeiner Krankenhaus.* "Zeitschrift für Klin. Med.," Band 30, Heft 3, 4.

IN Hamburg from 1872 to 1891 there were 52,938 cases of diphtheria, with a mortality of 8241, or 14 per cent. In the hospital 4358 were treated, with a mortality of 1584, or 36.3 per cent. Only the most important data will be given here. Of 743 cases treated in the hospital before the fourth day of the disease, 280, or 37 per cent., died; of 325 admitted later, 163, or 50 per cent., died. The cases with high temperature gave the worst results, but the duration of the fever had less influence, whilst albuminuria increased the mortality. It is curious that the cases which only had tonsillar diphtheria give worse results than when it is spread on other parts of the mouth; and nasal diphtheria is of grave import. Of 1768 tracheotomies 343 recovered. Of 935 *post-mortem* examinations, 47 cases showed lethal complications which had no relation to the disease. The therapy consisted in ice application, spray of salt or boric solution, antiseptic irrigation of the nose, and nourishing diet. The author concludes: the mortality of Behring's cases is improved by the great number of slight cases, and the percentual mortality diminished.

Michael.

Halderman, S. S.—*Antitoxin in the Treatment of Diphtheria; with Report of a Fatal Result from a Prophylactic Injection.* "Journ. of the American Med. Assoc.," June 13, 1896.

IN an epidemic of diphtheria of great severity the writer treated with antitoxin seventy cases, all presenting the typical signs of diphtheria, and some bacteriologically proved diphtheritic, without losing a single case. He used Behring's serum as a prophylactic in twenty-seven cases, "with the desired result of preventing the development of diphtheria in all but three cases; these three cases manifesting evidence of the disease within less than seventy hours, showing that it was already in their systems and incubating."

A fatal result occurred in a child of five years old. The child had just awakened from a sound sleep, and the prophylactic dose was injected into the subcutaneous tissue below the right scapula. He made but slight outcry, lay down, and was noticed to try to scratch the spot where the injection had been made. Within four minutes the child was cyanotic, lips swollen and puffy, no radial pulse and no heart beat to be made out. Twenty-five minutes' artificial respiration, etc., was of no avail. No explanation is offered, except "idiosyncrasy."

Along with antitoxin the writer recommends Loeffler's solution locally, calomel internally pretty freely, for its cathartic effects, free administration of beef tea, sterilized milk, coffee and any carefully prepared food the patient desired. Tr. erri perchlor. in syrup and glycerine every hour (to please the nurse); if very restless, chloral and morphia; later on small doses of quinine and strychnine. He never gives potass. chlorate internally, and thinks his good results may be partly due to that fact.

Arthur J. Hutchison.

Kortright, James L.—*The Value of Antitoxin.* "American Medico-Surg. Bulletin," July 4, 1896.

A SHORT paper without figures, in which the author expresses himself in favour of antitoxin in diphtheria. He prefers Aronson's antitoxin, or that prepared by the Brooklyn Health Board, to any other preparation. The risk run is not to be ignored, but should be faced in presence of the disease, but the practice of "immunizing" should be given up.

Arthur J. Hutchison.

Mundorff, Geo. Th.—*Severe Post-Diphtheritic Paralysis in an Adult treated by Antitoxin.* "Med. Record," June 27, 1896.

THE patient, aged twenty, had diphtheria in December, 1895, was treated without serum, and recovered. A few weeks later paralysis began to appear, slight at first, but growing steadily worse, till patient came to hospital, March 2nd, 1896. He was then greatly emaciated, muscles of limbs and trunk atrophied. Two injections of antitoxin were given, and the man recovered.

It should be noted, however, that the first injection was given on March 4th—*i.e.*, two days after admission, and, therefore, before it was possible to judge whether recovery had already commenced, or whether ordinary hospital treatment alone would have been sufficient; it is, therefore, impossible to give the antitoxin any credit for the result.

Arthur J. Hutchison.

Struck, Carl.—*Once more on Antitoxin.* "The Journ. of the American Med. Assoc.," May 16, 1896.

THE first part of this paper quotes and criticises statistics from various sources, apparently in favour of the antitoxin treatment of diphtheria. It points out that percentage mortality is misleading, because in many cases where this has been reduced even as much as half (fifty per cent.), the numbers dying from diphtheria per thousand inhabitants has increased (*e.g.*, Boston); again, because the number of cases reported has simultaneously increased immensely (*e.g.*, Berlin); again, because in some places antitoxin has not been applied to very severe cases, or to cases seen after the third or fourth day of illness (*e.g.*, Chicago); again, because when antitoxin is used the drug treatment is either greatly modified or entirely given up, which alone might produce all the good results ascribed to the antitoxin; again, in one hospital the mortality in 1876 was thirty-four per cent., in 1886 only six per cent., yet no antitoxin was used (Basel Children's Hospital); again, the short experience of two years is not sufficient to determine the value of antitoxin treatment—a severe epidemic may completely change our present ideas on the subject. If no discredit is to be attached to antitoxin because it fails when used on the fourth or a later day, surely no credit should be given it when recoveries take place under similar circumstances.

If antitoxin is a specific for diphtheria, why do its advocates not use it in every case, and why does percentage mortality under its use vary from two (Stockholm) to sixty-three (Trieste)?

In the rest of the paper the ordinary treatment by drugs internally and the local application of antiseptics is briefly criticized and condemned—even the use of antitoxin is likely to be less harmful. With regard to the use of antitoxin in laryngeal diphtheria, the writer points out that it is quite illogical, because the "croup" does not become manifest till the diphtheria has already existed three or four days, *i.e.*, till it is too late to expect any good from antitoxin. Many of these are not cases of diphtheria, but simply of catarrh.

The author maintains that doctors "are enthused on" antitoxin, because diphtheria is an acute disease presenting great and sudden changes in its course and its severity, and because its natural history is not really known; on the other hand, such a fever as "enteric" will never be treated by an enteric antitoxin.

Arthur J. Hutchison.

Vissman, William. — *The Therapeutic Value of Diphtheria Antitoxin.* "American Medico-Surg. Bulletin," July 4, 1896.

THIS is a short paper, with a table (taken from C. G. Coakley's paper, *vide supra*) of the statistics of diphtheria for Boston, New York, and Brooklyn from 1880 to 1895, in which is shown—

	New York.	Brooklyn.	Boston.
Average number of deaths from 1880 to 1895 ...	1631 $\frac{1}{4}$	824 $\frac{1}{4}$	452 $\frac{1}{2}$
Deaths reported in 1895	1634	1139	588
Average number dying per 10,000 inhabitants, 1880 to 1895.....	10·84 $\frac{11}{15}$	10·24 $\frac{1}{2}$	10·90
Number dying per 10,000 inhabitants, 1895 ...	8·73	10·35	11·73

New York is thus the only city showing improvement during the antitoxin year. The percentage mortality is, on the other hand, strikingly reduced. This is due to the fact that the number of cases recorded has immensely increased. Physicians no longer diagnose diphtheria, but in any throat case take a swabbing, send it to the Health Department, and leave the responsibility of the diagnosis in their hands. Thus a child may have a white spot in its throat on which by chance one Loeffler bacillus has settled—this in the bacteriological laboratory is sufficient grounds for the diagnosis of diphtheria, which is absurd.

The danger of using antitoxin as a prophylactic is pointed out.

Arthur J. Hutchison.

MOUTH.

Beuermann, J. A.—*The Differential Diagnosis between Benign Lymphomyxoma and Malignant Lymphomyelia.* "New York Med. Journ.," Aug. 8, 1896.

THE author remarks on the extreme difficulty of diagnosis by microscopical examination between benign and malignant neoplasms of lymph tissue, especially when this is not accompanied by a knowledge of the clinical history of the case. He proceeds to describe the two forms quoted in the title, prefaced by the suggestion that "we admit the so-called protoplasm is traversed by a reticulum, the "points of intersection of which, previously termed 'granules,' may grow into "solid lumps of living matter, which in further development become vacuolated, "afterwards reticulated, and, at last, transformed into nucleated protoplasmic "bodies." Also, that we admit the existence of a delicate reticulum in connective tissue tumours, this reticulum being transformed into protoplasm. The small round-celled sarcoma of Virchow is termed lymphomyeloma. He takes a "so-called adenoid growth springing from the mucosa covering the turbinate bone" as an example of the lymphomyxoma, which is thus described: "The "main mass of the growth consists of lymph tissue, *i.e.*, a protoplasmic reticulum, "the meshes of which contain an indistinctly granulated basis substance and a "number of so-called lymph corpuscles, formations of living matter, varying in "size from a small homogeneous lump to a granular corpuscle." Stress is also laid on the fact that the reticulum is always traceable and the appearance of the masses referred to are minutely described, and are said always to exhibit "radiating spokes of living matter, which enter into and inosculate with the reticulum of the basis substance." In the lymphomyeloma, on the contrary, no reticulum is seen in the denser parts, and in others it is extremely delicate—the number of somewhat larger coarsely granulated protoplasmic bodies is far greater, and the number of still larger bodies still more marked, approaching a gliosarcoma in appearance. The more frequent these "lumps" in the reticulum the more rapid the growth and malignancy of the growth; and the fact that the fibrous capsule is unchanged is in favour of the tumour being benign. This is of especial value in tonsillar growths. Finally epithelium is attacked by malignant tumours, and not by benign.

R. Lake.

Escat.—*Phlegmonous Lingual Amygdalitis*. "Rev. de Laryng.," Feb. 1, 1896.

THE author relates notes of a case occurring in his practice, and makes the following diagnostic points, which distinguish the condition from palatine tonsillitis, glossitis, phlegmon of the floor of the mouth, and Ludwig's angina.

1. Evolution of a unilateral phlegmonous inflammation occurring as a complication on the decline of an acute general catarrh.

2. Very clear semiology—*e.g.*, intense dysphagia, with sensation of a foreign body in the lower pharynx; dyspnoea of pharyngeal origin; unilateral suprahyoid pain localized over the great cornu and exaggerated on pressure; swelling of lateral submaxillary glands and median suprahyoid glands especially; affection of speech; immobility of the tongue on the floor of the mouth and swelling of its base without phlegmonous infiltration of the sublingual region; existence of a unilateral, red, smooth, phlegmonous tumour on the lingual tonsil, seen by laryngeal examination.

Negative signs: integrity of pharyngeal and palatine tonsils, of the larynx, and absence of the inflammatory projection of a sublingual phlegmon.

The condition will be less rare if the laryngoscopic mirror is more frequently used and localization of these purulent foci is more carefully made.

R. Norris Wolfenden.

Grumach (Reisenberg).—*A Hairy Pharyngeal Polypus*. Inaugural Address, Königsberg, 1895.

THE author removed a soft, round tumour, which was attached to the left side of the arcus palatinus. It was removed with the galvano-cautery snare. It consisted of a layer of epidermis, with rete malpigi, epidermal glands, hairs and ereciores pilorum, containing as *substantia propria* fat and muscle.

Michael.

Piergilli, Dr. B.—*A Case of Alarming Hæmorrhage after Tonsillotomy*. "Arch. Ital. di Otol., Rinol., Laring.," July 3, 1896.

A CASE of alarming hæmorrhage, which necessitated ligature of the right common carotid (by Prof. Durante), is reported by Piergilli. The tonsillotomy was performed by another surgeon and hæmorrhage appeared, recurring four or five times with intervals of five days, and so abundantly that, other remedies having failed, it was decided to tie the carotid. Soon after the patient became aphasic and had convulsions, but both these symptoms disappeared, and after two months recovery was complete.

Massci.

LARYNX.

Ebstein (Vienna).—*Leucæmic Infiltration causing Laryngeal Stenosis*. "Wien. Med. Woch.," 1896, No. 22.

THE patient was affected with an abscess of the neck three years ago, and since then had suffered from hoarseness. He proved to be leucæmic; his arytenoids and ventricular bands were infiltrated. Three months later the swelling had increased, and the supra-glottic region was also invaded and covered with a yellowish secretion. Stenosis became so severe that tracheotomy was necessary. He succumbed five days later, after a temporary improvement. *Post mortem*: The whole larynx was infiltrated, the vocal bands appearing as cylindrical masses. Microscopical examination showed sub-epithelial infiltration by leucocytes.

Michael.

Habermann, J. (Graz).—Contributions to our Knowledge of Chronic Laryngitis with Pachydermia. Separat-Abdruck aus der "Zeitschrift für Heilkunde," Band XVI., 1895.

IN a short introductory account the author traces the development of our knowledge of this subject, passing in review the various advances that have been made from the publication of Virchow's article in 1860 to the most recent utterances of Chiari.

The greater part of this paper is occupied by very detailed reports of the microscopic examinations of fifteen larynges affected with pachydermia. This collection of material included larynges in which there were only traces of the cup-like formation, and in which the initiatory stages of the process were studied; and others which presented appearances in the anterior parts of the vocal cords similar to the cup formations, and which various writers, notably Krieg, have termed pachydermia. Cases of tuberculosis and syphilis in which pachydermia occurred secondarily, and Virchow's circumscribed variety, which laryngologists are agreed is best classed with the papillomata, were excluded from the investigation.

The following is a brief summary of the conclusions arrived at by the author. In every case there were changes in the connective tissue of the mucosa and sub-mucosa of the true and false cords which appeared as a hypertrophy, and which varied greatly in degree and form in each instance. As a rule, this was confined to the superficial layers, and only occasionally were the strands of connective tissue between the upper layers of the internal thyro-arytenoid muscle involved. In the former case the elevations assumed the shape of elongated swellings, or polypoid or papillary excrescences at different parts of the true and false cords. On the true cords, the elevations usually ran from before backwards on the upper surface, and rarely appeared on the edge or lower side. Similar prominences, but often of a more papillary nature, were frequently found on the lower part of the outer wall of the ventricle. Polypoid outgrowths, or such as might even be designated polypi, were very often seen in the appendix. These occasionally descended almost to the surface of the vocal cord. Had they been larger they might have projected from the opening of the ventricle over the cord into the lumen of the larynx, and thus given rise to appearances which were formerly termed "prolapse of the ventricle."

Increased development of the papillary body of the vocal cords was always associated with the thickening of the connective tissue. At some places, especially the vocal process, also the posterior wall, and more rarely the pars libera, individual papillae developed into papilloma-like growths.

In the majority of the cases examined the cup-like prominences on the vocal processes were present. In the more marked of these the connective tissue presented a typical arrangement. The depression in the middle corresponded exactly to the point of the hyaline process. Its inner side was covered by more or less thickened connective tissue, from which strands radiated upwards and downwards, terminating at the surface in papillae, and covered by thick layers of pavement epithelium. In this way papillary excrescences originated above and below the point of the hyaline process, which at the same time formed the boundary of the cup-shaped prominence. The author favours B. Fränkel's view as to the development of the cup-shaped structure—viz., that it results from the pressure exercised by the vocal processes upon one another during phonation.

On the posterior wall of the larynx the changes in the connective tissue corresponded on the whole to those in the vocal cords. Besides a general hyperplasia of the connective tissue, in some cases papillary and small polypoid excrescences were found.

Changes in the Epithelium.—The author's investigations did not reveal any striking abnormalities in the distribution of the two varieties of epithelium in the larynx.

The cylinder-celled epithelium had proliferated only in a few instances, while the flat-celled showed a thickening in all cases. This was proportionate to the other pathological changes, and, as a rule, the flat-celled epithelium was thicker where the underlying connective tissue had proliferated. The flat-celled epithelium attained its greatest development on the vocal processes and posterior wall.

A true horny layer was generally found over a considerable area, and as a rule specially thick, on the vocal processes particularly, on the free edges of the vocal cords, and at some parts of the posterior wall. This layer was developed especially in those places that had been exposed to pressure during life, and this explained the great thickness of the layer in the middle of the cup-like formation.

Ulcers.—In the fifteen larynges examined, twenty-one erosions and ulcers were found. These occurred most frequently on the vocal processes (eight times on the right, seven left, five both); less often on the pars libera of the vocal cords (four right, two left, two both). When examined more closely, it must be confessed that, from the pathological changes in the ulcers themselves and in their vicinity, it was evident that the majority may have originated comparatively shortly before death. In a number of cases, however, it can be positively stated that the ulcers were of longer duration. In all the ulcers examined it could be proved that they had developed from the surface. Nothing in the pathological changes in the larynx or in the *post-mortem* examination of the rest of the body indicated that the ulcers were of a tubercular or syphilitic nature.

Edema.—The author's observations confirmed the association, already pointed out by other writers, of pachydermia and ulceration with diseases which cause general congestion—*e.g.*, pulmonary emphysema, cirrhosis of the liver.

Leaving out of account the epiglottis and ary-epiglottic folds, which were not examined histologically, the oedema extended over the ventricular bands, in which it was comparatively slight, and attained its greatest development usually on the upper surface of the vocal cords, extending to their inner margins. The true cords were thus transformed into thick cedematous swellings, in which the connective tissue fibres were forced far apart, leading to the formation of fairly large spaces filled with fluid. (Edema was found only once in the connective tissue to the inner side of the vocal process.

A. B. Kelly.

Heryng, Theodor.—*On Sulpho-ricinate of Phenol, and its Use in Tubercular and Chronic Diseases of the Pharynx, Larynx, and Nose.* "Therap. Monats.," July, 1896.

IN this, the third, paper on the above subject, Heryng describes shortly seven cases of tubercular disease of the larynx, and the results obtained in them with phenol. He has to record "improvement" much more often than "cure," but for this he blames chiefly the smallness and overcrowded state of his ward, and the absolutely hopeless class of case that constitutes his hospital material. Four of the seven cases were healed in his ward. In Cases II. and III., diseases of the vocal cords, brilliant results were obtained. In Case II. the tubercular growths on the vocal cords disappeared in two weeks, and in four weeks all the pathological changes had disappeared and the voice was clear and loud. Case III., a tubercular affection of both vocal cords, improved in a very short time; the voice became clearer and the cough ceased. In Case I., an infiltration of the pars arytenoidea as large as a hazel-nut was reduced to one-third its volume in eighteen days. The remainder was removed, at the patient's urgent request, by surgical methods. In Cases IV., V., VI., VII., in which all parts of the larynx, except

the epiglottis, were involved, the chief complaint was of dysphagia and dysphonia. Both symptoms improved in a relatively short time and the infiltrations shrank to "a minimum."

In a large number of hospital patients with advanced laryngeal phthisis and serious affections of the lungs (even hectic cases), quite unexpectedly good results were obtained with phenol as regards both ulcers and infiltrations.

The effect on tuberculosis of the epiglottis varied much, according to the nature and stage of the disease. One-sided infiltrations, not tending to break down, gave the best results. The less marked the inflammatory symptoms (redness and oedematous swelling) the quicker could the process be stopped. The epiglottis and the false cords were the worst parts to treat; improvement was obtained, but no cure, without first having resort to surgical procedures. After operating, a two per cent. pyoktannin solution should be applied to the raw surface, and no phenol used till eight or ten days later. During that time Heryng recommends the use of inhalations of menthol with tinct. opii and sodii brom., and a five to ten per cent. spray of cocaine before eating.

"Phenol sulpho-ricinate is no specific for laryngeal phthisis; but by removal
"of the inflammatory symptoms, by stimulating the absorption or elimination
"of the tubercular infiltrations and their products, by rapidly diminishing the
"dysphagia, it gives the larynx, in certain cases, its best chance of restoration of
"function. Combined with surgical (if necessary), hygienic, dietetic, and climatic
"treatment, it forms a notable addition to our means of combatting tuberculosis
"of the larynx, and also tubercular ulcers of the nose and pharynx."

Turning next to the treatment of various chronic conditions, Heryng reports satisfactory results in four cases of chronic hypertrophic rhinitis, where the swelling was not reduced by cocaine. Twenty to thirty per cent. phenol was rubbed gently on to the hypertrophied parts. The hypertrophy disappeared in two to three weeks, and free nasal respiration was restored. The accompanying retro-nasal catarrh and pharyngitis sicca improved at the same time.

Phenol was used in three cases of rhino-pharyngo- and laryngo-scleroma, producing considerable improvement, viz., a diminution in size of the infiltrations, and consequently decrease in the stenosis of the nose and larynx. Very good results were also obtained in cases of pharyngitis lateralis hypertrophica, both simple and syphilitic, and again in chronic, atrophic, or subacute pharyngitis with swelling and redness of the mucosa.

In the larynx it was found to be a very effective preventive of the recurrence of papillomata after operation; further, in some cases a few applications of the phenol were found sufficient to cause the papillomata to disappear completely without any surgical interference.

Arthur J. Hutchison.

Koschier (Wien).—*On Tracheal Tumours.* "Wiener Klin. Woch.," 1896, No. 24. A FORTY-SIX years old patient, who had suffered for two years with dyspnoea, constantly increasing, came complaining of severe attacks of suffocation. Laryngoscopic examination showed diminished mobility of the left vocal cord, and in the trachea two red excoriated tumours were seen, which nearly occupied the whole lumen of the trachea. After a preliminary tracheotomy the trachea was split longitudinally and the growths removed, their bases being cauterized. The microscopic examination showed that they were cylindromata. *Michael.*

Krebs, G.—*The Treatment of Chronic Catarrh of the Pharynx and Larynx.* "Therap. Monats.," July, 1896.

(Continued from p. 172.)

THIS paper takes up the local treatment of chronic pharyngeal catarrh. Counter-irritants applied to the skin of the throat and cold water fomentations are antiquated

and of but little value. Of gargling the same may be said, whatever method is used. Opinions differ as to inhalations; some consider them useful, while others think they render the throat more delicate and liable to take fresh colds. Alkalis, astringents, narcotics, and various pine oils are useful in different cases.

More trust is placed in insufflations, sprays, and pigments. Only mild, non-caustic substances may be used as powders. A caustic powder is not rendered less caustic by being mixed with some bland powder, such as starch, etc.; it is spread over a larger surface, but each grain of the active powder still retains its original caustic power: consequently, while some parts of the mucous membrane receive no treatment at all, other parts are strongly cauterized. Thus the only powders suitable for insufflation are such as boracic acid, tannin, calomel, or zinc sozoiodol (Schmidt).

For painting the throat, the best drug is a solution of silver nitrate, commencing with daily applications of a two per cent. solution, gradually increasing the strength to ten per cent., and at the same time diminishing the frequency of the painting. Bresgen and others have given up the use of this drug. Zinc chloride, one to two per cent. in water, or two to ten per cent. in glycerine, is highly spoken of (Mackenzie, Jurasz). Others prefer tannin in glycerine. There is also great difference of opinion with regard to the value of iodine solutions, Schech, Jurasz, and others recommending them in marked swelling of the mucosa; B. Fränkel and others in the atrophic form; while Gottstein, Stoerk, and others get no result from them in either case. Massage of the mucous membrane is another doubtful procedure.

Granulations on the posterior pharyngeal wall exist both with and without chronic catarrh. There is no means of deciding in a given case whether the granulations are to be considered normal or pathological, therefore to remove them may or may not do good; to replace them by cicatrices must do harm. On the other hand, the hypertrophic lateral bands require energetic, but not too extensive, treatment.

Tonsils that remain hypertrophic after puberty generally call for tonsillotomy. Uvulotomy is only required when the uvula reaches the epiglottis, and so causes constant irritation.

Pachydermia diffusa laryngis is then dealt with, but the author gives no opinion of his own on the subject, quoting instead the summary of O. Chiari's paper read at the Tenth International Congress at Rome.

Arthur J. Hutchison.

Mager (Wien).—*Case of Leucæmic Infiltration of the Larynx*. "Wiener Klin. Woch.," 1896, No. 26.

A FIFTY-EIGHT years old patient affected for one year by leucæmia became dyspnoic. The laryngoscope showed immobility of the right half of the larynx; the whole mucous membrane red and swollen; the swelling seemed to be a hard infiltration; the vocal bands were swollen. Death followed tracheotomy in a few days. The *post-mortem* examination showed perichondritis and necrosis of the right arytenoid cartilage. The histologic examination of the mucous membrane showed leucæmic degeneration of the tissues.

Michael.

Massei.—*Recurring Laryngeal Papillomata*. "Arch. Ital. di Laring.," April, 1896.

THE author presented to the Naples Academy of Medicine a girl who, notwithstanding a thyrotomy performed for diffuse papillomata of the larynx, had lost her voice. Recurrence had taken place on the inferior surface of the left vocal cord. He emphasizes his opinion already expressed that when it is not possible to

operate by endo-laryngeal methods for laryngeal papillomata, on account of dyspnoea, simple tracheotomy may be sufficient; not only because there are well authenticated cases of spontaneous disappearance of the growth, but also because thyrotony (as in the case presented) may not prove sufficient for a complete cure.

Massei.

Moure.—*Nodular Laryngitis of Children.* "Rev. de Laryng.," Feb. 8, 1896.

THIS condition is well known in adults, but for some years Moure has observed that these lesions were more frequent in small than large larynxes—*e.g.*, in tenors and females. Nodules are rare in baritones and exceptional in basses. They are more common in persons speaking or singing in a deep register. Analogous affections are frequently met with in children of seven to ten years of age. Children are often brought to the physician hoarse, or speaking in a deep voice, or aphonic. The voice is uncertain, raucous, bitonal, or aphonic, as in acute catarrh, but the condition persists for weeks or months. The redness and roughness of the cords is attributed to the onset of change of voice, but careful examination reveals the fact that emission of head or falsetto register, so easy to the child, has become impossible; the voice is diphthonic, and under the mirror the cords are seen to touch only at a point in their anterior third at a sort of rounded swelling, which leaves a small elliptical orifice in front and a larger one behind, and this explains the hoarseness and double sound on emission of the vowel *E*.

Inquiry elicits the fact that the child is made to sing at school in chorus. A certain number of children are made to sing the lower parts; the pieces are not chosen intelligently, and a child sings energetically. He soon becomes hoarse—at first temporarily, then permanently. Moure has often observed this sequence of events in school children. Chorus singing should be forbidden to every child who is hoarse, and the voices should be classed with more care. Rest and chloride of zinc applications and electrization do some good, but a certain amount of hoarseness persists, often only to disappear at the breaking of the voice towards twelve or thirteen years of age.

R. Norris Wolfenden.

Whistler, W. McNeill.—*Syphilis as it Affects the Larynx.* "The Clinical Journ.," July 15, 1896.

THE usual division of syphilis of the larynx into secondary and tertiary is unsatisfactory. It is better to divide into three stages: (*a*) earliest manifestations, *viz.*, catarrhal congestions and mucous patches; (*b*) an intermediate period, the signs of which are diffuse redness, thickening, and ragged ulceration, especially of the vocal cords—"relapsing ulcerative laryngitis"; (*c*) later manifestations—(1) acute gummatous inflammation, (2) relapsing laryngitis of the tertiary period, (3) chronic fibroid.

The congestion of early laryngeal syphilis may be diffuse or distinctly patchy. The latter, though very suspicious, is not absolutely characteristic. Mucous patches are not so rare in the larynx as some observers have thought. They vary in appearance according to their situation, but in their primary state they are all more or less papular. This serves to distinguish them from the erosions of ordinary catarrh. The intermediate stage may be the immediate outcome of the catarrhs and mucous patches of the early period, or it may show itself three or four years after the primary sore, or even later. The ulcers of this period are small and irregular in outline, with ragged thickened edges, often multiple, and the cords on which they are situated look as if pieces had been torn out. The ulcers are, however, comparatively superficial, and not usually accompanied by the perichondritis and necrosis of cartilage of the tertiary period.

Middlemass Hunt.

Winkler (Bremen).—*Contribution to Pathology of Stuttering founded on Examination of Stuttering School-children.* "Wiener Med. Woch.," 1896, Nos. 17, 18, 19.

IN the majority heredity could not be proved, and spontaneous cure is rarely observed. Physical shock caused stuttering in two cases. In sixteen per cent. the habit is acquired at school, and it is supposed that imitation is the cause, especially if there is physical depression. Seventy stuttering children had between them one hundred and thirty-six younger brothers and sisters with normal phonation. In some of the patients the disease appeared with development of speech, in others it followed acute disease, as scarlet fever or measles. In most of these cases hypertrophy of the tonsils or adenoid vegetations existed. In some cases the patients believed that the stuttering had a traumatic origin. Scrofula was found in several cases; in others various neuroses; and in some phimosi and balanitis was present. The formation of the skull, sometimes believed a cause of stuttering by some, was not borne out by these observations. In a few cases only was the intelligence diminished, or the expansive power of the thorax diminished. In fifteen cases the stuttering was complicated by other defects of speech. Stuttering of vowels was only observed in six cases, and the consonants were stuttered in the remainder.

Michael.

Massei.—*A Foreign Body in the Windpipe and another in the Gullet.* "Arch. Ital. di Laring.," July, 1896.

A CHILD, nine years old, who was keeping a gourd seed in the mouth, inspired it, and was suddenly seized with symptoms of suffocation, which subsided entirely in a few days. After several alterations in breathing the patient applied to the author, who discovered the grain at about the third or fourth tracheal ring. Tracheotomy was proposed but not accepted, and the child became worse for some days, when he suddenly improved. The foreign body was not seen, and supposed to have been coughed up. Five days later a fresh attack of dyspnoea, the patient's life in danger; and when the author saw the child he feared he would die in his consulting-room. The grain was lower down in another position; at the third attempt at extraction with laryngeal forceps, although displaced to the seventh tracheal ring, it was successfully removed, and breathing instantly became normal. The reporter, emphasizing the great advantages of operation *per vias naturales*, does not advise it always, as tracheotomy, in many instances, is not only necessary, but urgently demanded.

The foreign body impacted in the gullet was a piece with two artificial teeth which a gentleman had swallowed while sleeping. A surgeon, who was soon consulted, pushed it into the stomach, and on the following day the patient (a man about fifty) applied to Massei, who, after being assured that really the foreign body was not in the gullet, advised a diet consisting almost absolutely of potatoes. At the twentieth day the patient expelled the teeth without any trouble. Massei.

Massei.—*Diagnosis and Treatment of Laryngeal Tuberculosis.* Paper read at the second Congress of the Italian Laryngological Association in Florence in September, 1895.

IN regard to the diagnosis, the author points to the difficulty of a positive bacteriological answer, and relates cases in which the microscopical examination demonstrated the true nature of the disease, from which he concludes a great want of recognition, as there are cases which clinically resemble chondritis, and are of primary tuberculosis of the larynx. It is, then, highly probable that primary laryngeal tuberculosis is more frequent than generally believed.

From the other side he relates cases in which few tubercular bacilli were found, and the course, the issue, and the symptoms were such as to exclude the tubercular nature of the disease. He recollects Knight's and Sharp's opinions on the subject, and mentions some studies he began since 1892 on the argument of the presence of tubercular bacilli in healthy subjects, and which remained sterile. He then insists upon the necessity of an accord among the bacteriological researches, the organic impairment, and the clinical form for a right diagnosis.

Treatment.—Cases of complete recovery are reported with simple tracheotomy, curettement, or simple application of the phenol sulpho-ricinate proposed by Ruault, of Paris. Causes have modified the first opinion of the author in regard to laryngeal phthisis. He relates the late opinion of Heryng, reported in this journal; but as regards promises and indications, the author is of opinion that we do not know the circumstances which allow us to assist to a cure. He does not deny the possibility of a complete recovery; he cannot give exact indications for foreseeing the issue of this terrible disease.

But in general a narrowing of the larynx without serious lung impairment and general good health, let us hope much in tracheotomy, as the polypoid form and the chondritis seem to be the most accessible to a local treatment.

An early interference, besides, also assists in a probable success; hence the necessity of an early diagnosis and the interest of the few remarks above made, and the necessity of help to the diagnosis, not only with bacteriological researches, but even with microscopic examination of small pieces removed, and inoculation in animals, if necessary.

Massei.

THYROID, &c.

Finlayson.—*A Cretin under Thyroid Treatment.* "Glasgow Med. Journ.," May, 1896.

THIS is the further history of a child already described by Finlayson and referred to in the JOURNAL OF LARYNGOLOGY, May, 1896. Since October, 1893, the child had received thyroid treatment in hospital during four periods, amounting in all to nine months; the other seventeen or eighteen months the child had been at home and receiving no treatment. The total result was great improvement as regards growth, power of walking and of speech, appearance, condition of hair, mental condition, etc., etc. But it was noted that during residence in hospital improvement was marked and rapid, while during the intervals there was a certain amount of retrogression.

Arthur J. Hutchison.

Hodge, G.—*Myxœdema.* "American Medico-Surg. Bulletin," May 30, 1896.

A SHORT report of three cases. The first, occurring before 1885, was unrecognized during life. The second, the mother of two children, had always been healthy till onset of myxœdema; was treated without thyroid, and did not improve. The third, a girl of twenty-eight, had gradually grown ill during seven years, but myxœdema was not diagnosed till June, 1895 (prior to this the doctor had not seen her for eighteen months). She was then stout in limbs, body, and face, was irritable, dull, and took no interest in her work; complained of drowsiness and loss of memory; speech slow and hesitating, skin dry and hair falling out, and menstruation stopped. Under thyroid treatment (one grain of Armour's dried thyroid three times a day) and Bland's pill with arsenic, she rapidly improved. By Christmas she was practically well. She then stopped taking thyroid, and the symptoms began to return.

Arthur J. Hutchison.

Heddaeus (Heidelberg).—*Acute Strumitis, caused by the Diplococcus Fränkel-Weichselbaum, with Secondary Pneumonia.* "Münchener Med. Woch.," 1896, No. 27.

THE patient, a goitrous subject, had noticed rapid increase of the thyroid during the three months previous to his being seen. He also suffered from attacks of dyspnoea. A fluctuating tumour the size of the fist was found attached to the right side of the thyroid gland. This tumour was removed. A few days afterwards right pneumonia set in, the patient recovering, but the hoarseness persisting, which was due to right recurrent paralysis. The tumour was a cystic adenoma, and bacteriological examination proved the presence of the diplococcus Weichselbaumii in its contents and in the pneumonic sputum.

Michael.

Langfeldt (Ingelfingen).—*On the Thyroid Gland.* "Rauus Medicinalanzeiger," 1896, No. 13.

A BUTCHER, aged thirty, had suffered for years with increasing weakness and loss of weight. No organic disease or cause could be found. The case, however, became clear on the patient saying he eat every day for luncheon roasted pig's thyroid. The author prohibited the thyroid gland, and in a short time the weakness disappeared, the weight increased, and the patient was cured. This shows that roasting does not destroy the activity of the gland; that it has no influence on the stomach; that it destroys the normal fat; and that the effect ceases with the use of the gland.

Michael.

Winter, Henry Lyle.—*The Effects of Thyroid Extract in the Treatment of Graves' Disease.* "The American Medico-Surgical Bulletin," July 11, 1896.

A REPORT of four cases. Cases I. and II. were sisters; mother and grandmother were Swiss, and suffered from goitre, with (judging from report) the same symptoms as were present in the cases observed. The chief symptoms complained of were a feeling of nervousness, flushings, "startings" at slight noises, accompanied by violent palpitations and profuse general sweating; at other times heart not very rapid; goitre small; exophthalmos slight. In Case I., morning diarrhoea and anæmia; in Case II., no marked anæmia. Both did well on thyroid extract, in doses of $2\frac{1}{2}$ grains to 5 grains; in both it was able to be discontinued, and the patients reported themselves "entirely well." Cases III. and IV. were more typical cases of Graves' disease. In Case III. the condition had started after recovery from ovariectomy (the left ovary had been removed). Case IV. had been a prostitute. Thyroid treatment exaggerated the symptoms in both, and had to be given up. The history of Case IV. is interesting, but unfortunately not complete, as the patient was lost sight of. Whilst she remained under observation, receiving "mixed treatment," the symptoms of Graves' disease gradually and completely disappeared, but diminished reflexes, double vision, shooting pains, etc., pointed to the development of tabes. The author does not suggest that the two diseases were in any way related to each other, but merely states the facts as they occurred.

In conclusion, the author gives his reasons for considering Cases I. and II. to be cases of true exophthalmic goitre, and points out that while thyroid treatment may sometimes be beneficial, it must not be used indiscriminately.

Arthur J. Hutchison.

Obituary.

Dr. SAMUEL SEXTON.

OTOLOGISTS have lost another well-known colleague in Dr. Sexton, who died at the age of sixty-one on the 11th of July last. He was born in Ohio, and in 1856 took his degree at Louisville. His numerous writings have obtained for him a world-wide fame, amongst the more important of his communications being, "Rare Forms of Ear Disease," "Deafness and Discharge from the Ear" (written with C. A. Duane as co-editor), "The Effect on the Ear of High Atmospheric Pressure in Tunnel Construction," "Anomalies of the Membrana Tympani from Interruption of Intra-Tympanic Air Supply," "Excision of the Ossicles of the Drum of the Ear for Chronic Purulent Inflammation of the Middle Ear Tract," "Operation for Deafness and Tinnitus due to Immobilization of the Ossicles, and for Otorrhœa," etc., etc. His name is most intimately associated in our minds with the operation of extraction of the ossicles, and his instruments for these operations are in general use.

REVIEWS.

Clarkson, A.—*A Text-Book of Histology, Descriptive and Practical, for the Use of Students.* With 174 coloured original illustrations. Bristol: John Wright & Co. London: Simkin, Marshall, Hamilton, Kent, & Co., Ltd. Price, 21s. net.

THE first two chapters of this book are devoted to the general methods of histology, the subsequent chapters deal severally with the structure of the tissue or organ under consideration. References have been entirely omitted, and also, in the practical portions of the work, only the well-known and tried methods are given. In the chapters dealing with general methods, the preparations and uses of the various stains are given in most practical and clear language. As an example of this we would refer to (page 41) Weigert's method of staining medullated nerve fibres. For the rest the author carries out his task well, illustrating the tissues, as they are described, by a series of beautifully drawn and coloured plates, one hundred and seventy-four in number, which of their kind stand in the foremost rank; those of the special organs and of the cerebro-spinal system being of exceptional value. It is altogether a very valuable addition to the text-books of our profession, and one which we can recommend most cordially to both teachers and students as being of great intrinsic value.

Paget, S.—*The Surgery of the Chest.* Illustrated. Bristol: John Wright & Co. London: Simpkin, Marshall, Hamilton, Kent, & Co., Ltd. 10s. 6d. net.

THE author has been led by his studies and cases, several of which he has published, to write this book; he has gathered together into a handy

volume the cream of the accumulated records of the surgery of the chest. Mr. Paget gives less of his own views and opinions than he does of those of others. This is, however, not so great a matter as it would seem at first sight, for there is not a great divergence of opinion as to treatment, nor is there much in the questions of diagnosis and treatment. From amongst the most useful portions of the book may be mentioned (page 4) the description in congenital malformations of cervical ribs (page 8 *et seq.*), concussion and contusion of the chest, and the chapters on empyema. Under intra-thoracic new growths we also have much which is extremely interesting and instructive, and the advantage of a considerable amount of original matter. The illustrations, which are very good, were executed by Mrs. Paget.

In chapter v., on emphysema, Mr. Paget has omitted to allude to the altered conditions which will now be evident in wounds of the chest caused by small-bore bullets and high velocity. We doubt the occurrence of emphysema, and perhaps hæmatothorax, except as a result of other forms of injury—as, for example, shell wounds; nor should the mortality of penetrating wounds be as high as quoted, viz., sixty per cent., and “much higher for actual gunshot wounds of the lung”—that is to say, where the above conditions apply, and where first field dressings are in use. We would draw attention to the pertinent remarks bearing on the medico-legal aspect of wounds of the heart in chapter x. An important point is raised (page 131) in the reduction of diaphragmatic hernia, the surgeon being advised to operate through the pleural and not peritoneal cavity. Certainly Mr. Paget adduces very weighty reasons for this course, and the cases quoted also bear out this view, though the author does not go as far as Rydygier and advocate opening the pleura, when the abdomen has already been opened.

In conclusion, we have perused this work with pleasure and profit, and feel sure that it will occupy a place in every library of reference and prove of great value to the surgeon and practitioner; and stand as a proof of the greatest care and perseverance on the part of its author.

NEW PREPARATIONS, ETC.

IMPROVED GREGORY POWDER. (J. L. Bullock & Co., 3, Hanover Street, Hanover Square, London, W.)

This powder, whilst maintaining the full properties of the original compound, has been most materially reduced in bulk, by condensing it and removing all inert matter. We have thus a powder which but little resembles that nauseous compound which was one of the small terrors of childhood, and which, if given in solution, is almost pleasant. It can be obtained and administered in the form of cachets when the patient is old enough to swallow one.

SOLOIDS—(1) Zinc Chloride gr. i.; (2) Corrosive Sublimate gr. 1.75; (3) Silver Nitrate gr. i.; (4) Potassium Permanganate gr. 5. (Burroughs, Wellcome, & Co., Snow Hill Buildings, London, W.C.)

There is a structural difference between a “soloid” and a “tabloid,”—“soloid” being the name given to compressed drugs used for external application, as the

above. Each has a distinct colour added to it, if it has not already one of its own: corrosive sublimate, purple; zinc chloride, yellow; silver nitrate, blue; and so on. This has the effect of making the solutions as distinctive of external applications as the solid form shows they are not to be taken internally. In dissolving them it is easy to estimate the strength of the solution: thus, the corrosive sublimate gives with four ounces of water a strength of one in one thousand. These preparations are of obvious value when travelling, or where there is no chemist within reach, or in an emergency at any time. They are also a great convenience when operating in the country, their small compass comparing most favourably with the more bulky solutions.

ETHYL CHLORIDE (BENGUÉ). (B. Kühn, 36, St. Mary-at-Hill, London.)

The properties of this preparation are already sufficiently well known. It is the present model of tube to which we wish to draw attention. At one end is the usual pin-hole jet—at the other a glass rod, with a minute hole up it for a short distance. This is scratched with a file and broken off, if the original orifice plugs. There is also a spare cap for use in event of the second end being turned into a spray.

COLCHICINE SALICYLATE CAPSULES. (G. Trochet, Paris. Agent: B. Kühn, 36, St. Mary-at-Hill, London.)

This preparation of colchicum appears to be very reliable and to be much less depressing than the older forms of the drug. The mode of administering it also is one to be recommended, the form and size of the capsule being very elegant; also the salicine used is the natural methyl salicylate, and is combined with colchicum in the form of colchicine, thus giving in each capsule a dose, one-260th grain of the latter, and five grains of the former. Lastly, they will be found reliable in quality and strength.

THE JOURNAL OF LARYNGOLOGY, RHINOLOGY, AND OTOTOLOGY.

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A METHOD OF MAKING ANATOMICAL SECTIONS OF THE TEMPORAL BONE.¹

By Dr. CHIUCINI (Rome).

I AM convinced of two things: (a) that although much has been studied with regard to the temporal bone, it would be absurd to say that the subject has been exhausted, and that there is nothing left to do; (b) collections of temporal bones are of immense value to the scientific aurist, because in their study is to be sought the solution of many important questions. I hold that it is most useful (1) to form collections of temporal bones; (2) that in making sections of them the bone should suffer as little damage as possible, both in the various points of its anatomy and in their relation to one another. Hence it is important to preserve all the parts of the bone, for in making some comparative studies one point of the bone may become of great interest, which appeared of little or no importance at the period of making the section. For this reason the use of the gouge and hammer should as a rule be abandoned, as it leads to the loss or destruction of more or less important parts. Of course this is not always possible; still it does not militate against my principle, that in order to obtain the greatest profit from the study of sections of temporal bones we should make the preparations with as little damage as may be. A section should therefore comply with the following rules:— (1) Respect the integrity of the entire bone as much as possible. (2) Make methodical sections so as to show the greatest possible number of interesting anatomical particularities, and passing so near other points that they can easily be demonstrated by secondary sections. (3) See, in conclusion, that the several fragments can be easily put together so as to be able to study and preserve the temporal bone in its entirety. Neglect of these regulations is apt to leave us with a collection of frag-

Paper read at the Fifth International Congress of Otology: Florence, September, 1895.

ments, requiring all our patience in order to place them in relation again.

The sections of the temporal bone can be readily made with the lower numbers of the saws used by watchmakers; they leave quite a narrow furrow. With dried bones the sawing is facilitated by doing it under a small drip of water; with fresh bones the dura-mater and periosteum should first be removed with great care.

FIRST SECTION OF THE TEMPORAL BONE is effected in two cuts:—

First cut. (Fig. 1).—Passes along a line which, perpendicular to the



Fig. 1.

direction of the zygomatic process, goes through the external superficies of the squamous portion at the level of the articular tubercle. In a perpendicular direction¹ to the external surface of the squamous portion it passes from the exterior to the interior, so as to traverse all the articular tubercle.

Second cut. (Fig. 2, a¹).—Starts from the superior margin of the petrous bone, from a point corresponding to the bottom of the internal auditory canal, and comes forward to unite with the extremity of the preceding section.

¹ Here and elsewhere through the paper it is understood that the rules given cannot always be applied in an altogether restricted and absolute sense.

By these two cuts the temporal bone is divided into two pieces: an anterior portion (which we will refer to as No. 1, in order to explain what follows) containing the anterior part of the squamous portion and the apex of the petrous bone, with part of the cochlea; and a posterior part, No. 2, containing all the rest of the temporal bone.

SECOND SECTION OF THE TEMPORAL BONE.—It is also effected by two saw cuts, both of which are carried out on piece No. 2.

First cut. (Fig. 1.)—Is parallel to the first division in the preceding section, but more posterior, so as to traverse the superior root of the

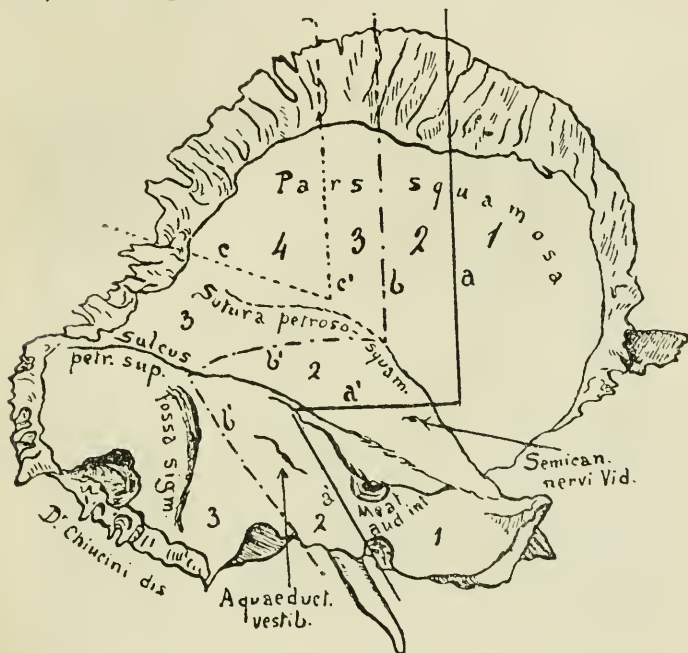


Fig. 2.

zygomatic process, passing a few millimètres in front of the Glasserian fissure. It stops on encountering the squamo-petrosal suture (in children), or its remains (in adults), or the line corresponding to this suture.

Second cut. (Fig. 2, *b'*.)—This also starts from the superior margin of the petrous bone, at about one centimètre from its point of union with the squamous portion; it comes forward describing a small internal concavity, so that at the inferior surface of the petrous portion it grazes the internal margin of the styloid process; it finishes by meeting the extremity of the preceding cut.

With these two saw cuts piece No. 2 in its turn has been divided into two parts: an anterior part, containing the tympanic cavity, and a posterior part, No. 3, in which are the meatus auditorius externus and the mastoid process.

THIRD SECTION OF THE TEMPORAL BONE.—This likewise is effected by means of two cuts through piece No. 3, just described.

First cut. (Fig. 1, c.)—Passes forward from the external border of the digastric fissure, traversing the mastoid process, and going close to the point of union of the base of the petrous bone with the squamous portion; it stops after having traversed the posterior half of the external auditory meatus.

Second cut. (Fig. 1, c'.)—Is parallel to the first cut in the second section, but more posterior, so that it passes through the middle of the external auditory meatus so as to meet the last cut.

This third division of the temporal bone divides piece No. 3 into two

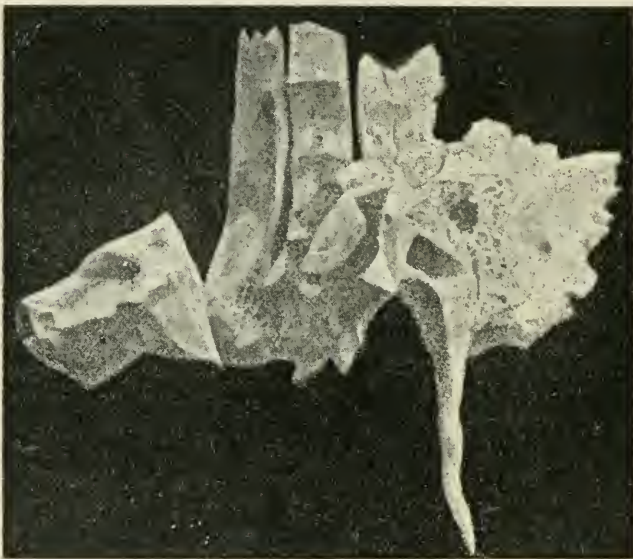


Fig. 3.

parts, of which the external is labelled No. 4. It shows in section the mastoid cells, and the posterior and anterior walls of the external auditory meatus.

Such are the three chief divisions that I regularly make in preparing sections of the temporal bone. By this method the bone is sawn into four principal pieces, in which many anatomical details are laid bare, while other points fall so near that it is easy to show them with secondary sections. In carrying out these latter we must bear in mind the principle of leaving the bone as much as possible in its entirety. Hence we should avoid the use of gonges, chisels, files, etc., which may destroy the parts, and simply use the watchmaker's saws for making further sections.

It is perfectly easy to put together again these four parts of a sectioned temporal bone. Three small hinges are fixed on the external surface of

the squamous bone (Fig. 1), (the first along the first cut of the first section, the second along the first cut of the second section, and the third along the second cut of the third section), and firmly maintain the temporal bone in its complete normal configuration, when the hinges are closed; when they are opened, the bone opens into its several parts, like the pages of a book (Fig. 3). This plan of union prevents loss and confusion with regard to the pieces of different temporal bones, and in no way damages or interferes with the clearness of the preparation. With regard to the subdivisions, which are always small and sometimes very delicate, I have succeeded in uniting them to the main piece to which they belong by means of small gummed ribbons. (*Vide* Fig. 3, piece No. 2.) These act like so many small hinges, and permit examination of the most minute and complicated parts. This system also offers the advantage of being easily removable, if necessary, without in any way injuring the small and delicate parts of the preparation. In this way I have been able to replace in position piece No. 2, after it has been subdivided into five fragments for the minute demonstration of the labyrinth.

StClair Thomson (*Trans.*)

SOCIETIES' MEETINGS.

AUSTRIAN OTOLOGICAL SOCIETY.

First Special Annual Meeting (OTOLOGENTAG), June 28th and 29th, 1896.

(*"Monatschrift für Ohrenheilkunde,"* July, 1896. Reported by Dr. JOSEPH POLLAK.)

(*Continued from page 206.*)

President—Prof. GRUBER.

Dr. R. SPIRA (Cracow). *A Case of Central Osteitis of the Mastoid Process running a Latent Course, and presenting the Symptoms of Trigeminal Neuralgia.*

This was a man seventy-three years of age, otherwise healthy and strong, and who for some time had suffered from chronic catarrh of the middle ear, subsequent to acute tympanitis following influenza. At the same time there came on severe pains in the neck, larynx, and corresponding half of the head. There was an accumulation of exudation in the tympanum, which was evacuated, after which the otitis ran through its usual course. The drum cicatrized in three weeks. There were no pains in the ear or mastoid process, but over the half of the head, occasionally propagated to the other side without obvious cause. A diagnosis of trigeminal neuralgia was made, and iodide of potassium and galvanism were ordered. Soon after the second sitting there occurred paralysis of the abducent nerve of the same side, with its typical consequences, diplopia and vertigo.

The patient suffered also from sleeplessness, loss of appetite, emaciation, and weakness, but no fever nor cerebral disturbance. Nothing was

observed in the ear or mastoid process. However, a few months later there occurred from time to time transient evidences of irritation in the mastoid region, accompanied each time with a diminution of the headache, the latter returning as the inflammatory symptoms subsided. After about eight months a sub-periosteal abscess on the mastoid process was opened: the cortex was found carious and perforated by a fistula. The fistula was enlarged, and in the deeper part of the bone there were found caries and pus. The bone was scraped out, plugged, and dressed antiseptically. After six weeks he was perfectly well, the headache completely disappeared, and the paralysis of the sixth nerve rapidly diminished.

The difficulty in this case was to decide upon the causal nexus between the neuralgic pains and the mastoiditis, also the relation of the abducent paralysis to the mastoid disease.

The question arises as to whether there was not, perhaps, an extradural abscess in the posterior fossa which was evacuated when the bone was laid open. The course of the disease and the result of the operation would give some support to such an opinion, and otherwise the occurrence and course of the paralysis of the sixth nerve would be more difficult to explain. Lastly, Dr. Spira asked whether those present could explain the combination of symptoms in the light of the anatomical changes which had been found.

Prof. URBANTSCHITSCH thought the abducent paralysis could be explained by the presence of the middle ear disease without the assumption of there being a sub-dural abscess.

He had in an exhaustive treatise drawn attention to the frequent occurrence of motor disturbances of the eye in cases of disease confined to the middle ear.

Dr. FRANCK-HOCHWART drew attention to the *post-mortem* examinations made by Darkschewitsch and Tarchanow, which explained paralysis of the whole facial nerve and of the abducent nerve on another basis. They found in such a case a neuritis of the nerves referred to without there being any other source of compression detectable, and they looked upon the neuritis as being of infectious origin and dependent upon a cario-necrotic process in the temporal bone.

Prof. URBANTSCHITSCH, in opposition to Dr. Franck-Hochwart, said that such motor disturbances could be brought about from some particular point in the meatus or middle ear, but that they could be of reflex nature.

Prof. POLITZER doubted very much the possibility of a reflex paralysis existing in this case, because if such were possible it would be observed more often in view of the great frequency of suppurative disease of the middle ear; while, on the contrary, it was one of the rarest events possible.

Prof. URBANTSCHITSCH said that, on the contrary, in a case of sudden paralysis of the abducent muscle occurring during the operation of extraction of polypus, paralysis remained permanent. The circumstance that pain occurred during catheterization made it probable that mucus was driven through the tube into the tympanum.

Dr. SPIRA remarked that what had led him to think of extra-dural abscess was the statement of Prof. Politzer that, according to his observation, frequent alternations and intermittences and recurrences of dangerous symptoms were the most important diagnostic indications of extra-dural abscess.

Prof. GRUBER was of opinion that this case was to be looked upon as one of disease of the mastoid process, such as is observed after influenza. He had drawn attention during the first influenza epidemic to the fact that the aurist had frequently to deal with the consequences of influenza in the mastoid, even when the influenza itself had long run through its course, because the microbes find in the mastoid cells a very favourable nidus for multiplying undisturbed and bringing about their usual injurious effects. He considered this point illustrated by the case under their notice.

Prof. POLITZER. *Ménière's Complex of Symptoms in a Case of Traumatic Lesion of the Labyrinth. Demonstration of the Histological Appearances.*

In the introduction to his address Prof. Politzer dwelt upon the importance of the anatomical examination in traumatic lesions of the labyrinth, with a view to the explanation of the accompanying disturbances of function, especially of Ménière's complex of symptoms which come on in consequence of these. In literature there is already a long series of cases of deafness resulting from concussion or fracture of the skull, but only two have undergone full anatomical investigation, one by Voltolini and the other by himself. In both the fissure at the base of the skull went right through both pyramids as far as the inner wall of the tympanum, and without visible lesion of the tympanic cavity. The bleeding occurring in the labyrinth brought about deafness and Ménière's symptoms. Histological examination of traumatic affections of the labyrinth are up to the present unknown.

He was now in a position to demonstrate the histological appearance in a case observed thoroughly during life. The subject was a shoemaker aged twenty-one, on whose head, on the 28th December, 1895, a bushel of mortar fell, rendering him unconscious. He was taken into Prof. Dittel's surgical wards, where consciousness returned after three days, but he remained totally deaf, and his gait was unsteady and reeling. On the 17th January he was transferred to Prof. Krafft Ebing, who found right-sided paralysis of the facial nerve, paralysis of the right half of the soft palate, loss of sense of taste in the right half of the tongue, a reeling gait, with a tendency to fall to the left side, and some defect of intelligence. The organs of hearing were examined on the 24th January, and on both sides there was found retraction of the somewhat opaque membranes, and complete deafness for every kind of noise or tone. On the 31st there suddenly occurred severe feverish symptoms, with diffuse pain in the head, vomiting, and dulness of the sensorium. The cerebral symptoms increased during the following days, and there developed at the same time a purulent middle-ear suppuration in the right ear, with bulging of the tympanum. Paracentesis gave vent to a

quantity of pus, but the cerebral symptoms were not thereby affected, and three days later death took place, apparently from diffuse meningitis. The details of the course of the disease up to the fatal ending have been communicated by Dr. Joseph Hirschl.

On *post-mortem* examination there was found purulent meningitis and a fissure at the base of the skull which went through both petrous bones, but only extended as far as the inner wall of the tympanum. There was empyema of the sphenoidal and of both maxillary sinuses, purulent exudation in the right tympanic cavity. The fissure passing through the petrous bone went on both sides two millimètres behind the internal auditory meatus, as far as the upper edge of the petrous, and it could be followed from here on the upper surface of this bone as far as the tegmen tympani. On the right side it passed through the greatest diameter of the cochlea, and on the left side through the lowest cochlea whorl. There was blood-stained exudation in both cochleæ. The microscopical examination of the decalcified labyrinth showed, on the right side, both scalæ of the cochleæ were, in all their turns, filled with an exudation, partly of fine granular nature, partly consisting of round cells; in various parts of the endosteum there was a growth of nucleated connective tissue. The details of Cortis' organ could not be distinguished. The nerve fibres of the modiolus, the spiral membrane, and the spiral ganglion were invaded by fine granular substances and nuclear cells. Similar places of exudation to those in the cochlea were found in the utricle, in the ampulla, and in the semicircular canals. On the outer side of the membranous ampullæ and semicircular canals there shot up nucleated, neoplastic, connective tissue.

In the left labyrinth there was much less free exudation than in the right. On the other hand the scala tympani of the first turn of the cochlea showed a fine, reticulated, new connective tissue, which contained numerous spindle-celled nuclei, and along with them, here and there, wandering cells; processes from the new connective tissue to the endosteum were found also in the second turn of the cochlea and in the cupula. Cortis' organ was rendered unrecognizable by the enormous proliferation of epithelial tissue. The bundles of nerves of the ramus cochleæ showed the same changes as on the right side. In the vestibule there were here and there thickenings of the endosteum, as also in the ampulla and the semicircular canals. The membranous structures of the vestibule and semicircular canals showed very little change.

In considering this case Prof. Politzer thought that the total deafness, as well as the occurrence of Ménière's symptoms, were quite explained by the anatomical appearances. The empyema of the sphenoidal and maxillary sinuses, as well as the purulent inflammation in the right ear, were, without doubt, the results of the suppurative inflammation of the pharyngeal tissues, produced by the fracture of the base of the skull. Nothing definite can be said with regard to the occurrence of the meningitis. Whether it was the result of the empyema of the sphenoidal sinus or of the purulent middle-ear inflammation, or of lesion of the meninges not detectable by the naked eye, could not be made out. A point of especial interest in the histological examination is the evidence of an intense

inflammatory formation of new connective tissue five weeks after the injury which gave rise to it. Prof. Politzer elucidated the description by means of a number of large charcoal drawings and the demonstration of the histological preparations.

Prof. GRUBER. *On Otitic Intracranial Affections.*

Prof. Gruber referred to the insufficiency of subjective as also of objective morbid signs and symptoms in connection with the topical diagnosis of intracranial process. On this account there had recently been made very complete studies of the statistics, and also endeavours to place these at the service of practical otology.

Valuable works had been published within recent years by Körner, Forselles-Robin, and more particularly quite recently by Hessler. Prof. Gruber had endeavoured to turn to advantage in this direction the large amount of material afforded by the General Hospital at Vienna. He was indebted to Prof. Weichselbaun for having placed the records of the *post-mortem* examinations at his disposal; also to Drs. Alt and Steiner for their assistance in analyzing the records of the sections dating from the 1st January, 1873, to the 1st December, 1894, and numbering 40,073. The year 1873 was selected because it was first in this year that the otological clinics were established, so that the changes in the organs of hearing were studied more carefully than was previously the case.

The following were the chief questions which he desired to solve, and the answers afforded by the results of these examinations.

Question 1. What is the proportion of the number of deaths from intracranial inflammatory affections to the total of 40,073? It was found that 1806—1242 men, 564 women—that is to say, 4·5 per cent., died from one or more intracranial inflammatory affections.

Question 2. What is the relation of the number of the inflammatory intracranial diseases obviously of otitic origin, compared with that of the simple diseases of this character not arising from any such cause? In reply it was found that the otitic origin was present in 232 cases—163 men, 69 women—that is to say, that out of the total of 1806 cases of intracranial affection, they amounted to 12·8 per cent., and in relation to the grand total of *post-mortem* examinations—40,073—0·58 per cent. Out of these 232 cases, 81 cases were followed to the autopsy by otologists, the remaining ones came from the surgical and medical departments; therefore, 34·91 per cent. of them by otologists, 65·09 per cent. by resident medical officers and surgeons. In regard to this question, Prof. Gruber remarked that he was quite convinced that, in a considerable number of cases of inflammatory intracranial disease, the connection with otitis was overlooked, and either did not come to section, or the relation to otitis was missed because there was no idea of its presence. This must also be the case in other institutions. If, therefore, the statistics in this direction are not quite exact, they are at least of the same value as those brought forward by other authors.

Question 3. What is the relation of these secondary otitic intracranial inflammations which were dissected to the age of the patients? It must here be mentioned that in the general hospital at Vienna

children under six years are only very exceptionally admitted. They are treated in the children's hospitals. In the great number of *post-mortems*, therefore, there is found only one of a child of three months old, and one of a child of one month. The age of the others is shown in the following table :—

	Males.	Females.
From 5 to 10 years	0	2
10 „ 20 „	53	14
20 „ 30 „	46	26
30 „ 40 „	30	12
40 „ 50 „	22	4
50 „ 60 „	13	4
60 „ 70 „	3	1

From this it will be seen, as was already pointed out by the author in January, 1862, that purulent middle ear inflammation is most dangerous in individuals between the ages of puberty and of fifty, and that in the earlier and later ages life is less threatened.

Question 4. On which side was the ear disease in the 232 cases which came to *post-mortem* examination?

Answer—

Right ear	118	.....	= 50'87 per cent.
Left ear.....	103	.....	= 44'39 „
Both ears	6	.....	= 2'59 „
Not stated	5	.....	= 2'15 „

Question 5. Of what nature was the ear disease in the 232 bodies? In answering this question Prof. Gruber ranges the cases into two categories. First : Those in which only the soft parts of the middle ear were affected. Secondly : Those in which caries or necrotic disease of the temporal bone was present.

Intracranial secondary inflammatory affections were found in simple suppurative otitis media without caries 65 times (44 males, 21 females), equal to 28 per cent.; whereas, in those complicated with caries, 167 times (128 males, 39 females), equal to 72 per cent. It will be seen from these enumerations that in the simple as well as in the carious cases, the frequency was greater in men than in women, but simply for the reason that the primary affection was more frequent in the male than in the female sex.

Question 6. Involvement of the vessels. In the first place it appeared to Prof. Gruber of importance to take notice of the disease of the blood vessels of the dura mater, as it was well known that these frequently acted as the intermediary between the primary disease in the organ of hearing and the inflammation of the brain and its membranes. It was, therefore, incumbent to note how often sinus affections occurred altogether in the 232 cases, which sinus was affected, both in simple middle ear inflammation and in cases complicated with caries. Finally, what kind of thrombus was found in the different cases. The following tables show these points :—

SUPPURATIVE MEDIAN OTITIS, SIMPLE (WITHOUT CARIES).

Nature of the Sinuses Affected.	Solid Thrombus.						Total.	Suppurating Thrombus.						Total.
	Males.			Females.				Males.			Females.			
	R.	L.	B.	R.	L.	B.		R.	L.	B.	R.	L.	B.	
Sigmoid Sinus.....	3	2	..	1	2	..	8	2	2	..	1	2	..	7
Transverse Sinus alone or with the Sigmoid.....	3	..	..	2	..	..	5	3	..	..	1	..	..	4
Cavernous Sinus and its Appendages.....	3	1	..	..	..	..	4	1	1	..	..	1	1	4
Superior Petrosal and Sigmoid Sinuses.....	..	..	..	1	..	..	1	..	..	..	..	1	..	1
Superior Petrosal and Transverse Sinus.....	..	..	..	1	..	..	1	..	..	..	1	..	..	1
Sinus of Jugular Vein and Transverse Sinus.....	1	..	..	..	..	..	1	..	..	..	..	..	..	..
Sigmoid, Transverse, and both Cavernous Sinuses.....	1	..	..	..	..	..	1	..	..	..	..	..	..	..
Sigmoid Sinus and Jugular Vein.....	1	..	..	..	..	..	1	..	..	..	..	..	..	..
Cavernous Sinus.....	..	..	1	..	..	..	1	..	..	..	..	..	1	1
Transverse and Cavernous Sinuses and Jugular Vein..	1	..	..	..	..	..	1	1	..	..	..	..	..	1

SUPPURATIVE MEDIAN OTITIS (WITH CARIES).

Nature of the Sinuses Affected.	Solid Thrombus.						Total.	Suppurating Thrombus.						Total.
	Males.			Females.				Males.			Females.			
	R.	L.	B.	R.	L.	B.		R.	L.	B.	R.	L.	B.	
Sigmoid Sinus.....	5	11	1	..	2	..	19	3	8	..	..	1	..	12
Transverse Sinus alone or with the Sigmoid.....	5	13	..	5	2	..	25	4	8	..	3	2	..	17
Sigmoid and Longitudinal Sinuses.....	..	1	..	..	1	..	2	..	1	..	..	..	..	1
Sigmoid Sinus and Jugular Vein.....	4	3	..	1	1	..	9	2	3	..	..	1	..	6
Bulb of Jugular Vein.....	..	1	..	1	1	..	3	..	1	..	..	1	..	2
Sigmoid and Transverse Sinuses and Jugular Vein..	1	1	..	1	..	..	3	1	1	..	..	..	..	2
Cavernous Sinus.....	..	..	..	..	..	1	1	..	..	..	..	..	1	1
Sigmoid and Reil's Sinuses ..	1	..	..	..	..	..	1	1	..	..	..	..	..	1
Cavernous and Petrosal Sinuses.....	..	..	1	..	..	..	1	..	..	..	..	..	..	..

The total of cases without caries, which were dissected, and in which sinus thrombosis was found, amounted to 42 (24 with solid, 18 with broken-down suppurating clot). The total of those with caries, showing sinus thrombosis, amounted to 106 (64 with solid, 42 with a purulent breaking-down clot). The sinuses most frequently affected were the sigmoid and transverse [lateral, D. G.], and this occurred 24 times in the 42 cases without caries, and 73 times in the 106 with caries; according to sex, 73 males and 24 females.

Question 7. What consecutive affections were found in the brain and its membranes in the 232 cadavers? The writer here again distinguishes cases according to whether caries was present or not.

In simple otitic processes, without thrombus in the sinus, there was found:—

Meningitis31 = 13 per cent. (21 men, 10 women).

Cerebral abscess ...19 = 8·2 „ (14 men, 5 women).

Cerebellar abscess... 1 = 0·4 „ (1 woman).

In simple otitic disease, in which there was a thrombus in one of the sinuses :—

Meningitis12 = 5·5 per cent. (7 men, 5 women).

Cerebellar abscess... 2 = 0·8 „ (2 men).

In those cases in which there was caries of the temporal bone, but no sinus thrombosis :—

Meningitis.....40 = 17 per cent. (34 men, 6 women).

Cerebral abscess ...13 = 5·6 „ (12 men, 1 woman).

Cerebellar abscess .12 = 5·5 „ (8 men, 4 women).

In those with caries and thrombosis :—

Meningitis21 = 9 per cent. (17 men, 4 women).

Cerebral abscess ... 7 = 3 „ (6 men, 1 woman).

Cerebellar abscess . 4 = 1·6 „ (2 men, 2 women).

Meningitis with cholesteatoma 8 = 3·2 per cent. (6 men, 2 women).

Three died of pyæmia out of those without caries, but with otitic sinus thrombosis, 16 (11 males, 5 females), equal to 6·8 per cent. ; and of those with caries and thrombosis, 32 (22 males, 10 females), equal to 13 per cent.

The material obtained from the records of the *post-mortems* has been analyzed from various other points of view, regarding which Prof. Gruber proposes to publish further particulars.

Prof. POLITZER. *Contributions to the Operative Opening of the Cavities of the Middle Ear.*

In the introduction to the paper, Prof. Politzer referred to the important advances which had been made in aural surgery, through the improvements in the methods of laying open the cavities of the middle ear by operation. The value of these will only be known later on, when the indications for their adoption are more precisely defined than at present. Prof. Politzer thinks that at present operations are carried out by many without strict indications, and before endeavours have been made to cure the suppuration by the customary methods of treatment.

The anatomical structure of the temporal bone, and the extension of pneumatic spaces into its furthest parts, favour the establishment of persistent foci of suppuration and of deep burrowing diseases of the osseous structures. To this must be added the manifold mechanical obstructions to the flow of pus from the outer meatus, the frequent development of cholesteatoma, and the destructive character of certain pathogenic micro-organisms—diphtheria, tuberculosis, etc. In spite of all this, spontaneous recovery is not uncommon, as is shown by the formation of fistulæ on the mastoid process, with the ejection of sequestræ, the formation and epidermization of extensive defects of bone in the outer attic and the postero-superior wall of the meatus, with cessation of suppuration. Prof. Politzer showed a skull in which, as the result of chronic middle ear suppuration, the outer wall of the attic and the postero-superior wall of the osseous meatus had been destroyed, and in which a large cavity had been formed, made up of the external meatus, the

tympanic cavity, and the mastoid antrum, while exit of the secretion was rendered perfectly free. The bone defect in this preparation was almost identical in its anatomical relations with that produced artificially in operative opening of the spaces of the middle ear. The principle of the operation, for the introduction of which into practice we are indebted to Küster, consists in the removal of the postero-superior wall of the osseous meatus and the outer wall of the attic, whereby the removal of carious ossicles, the clearance of granulations, cholesteatomatous masses, and carious areas of bone from the tympanic cavity and the mastoid process are rendered possible, and the conditions favourable for the cessation of suppuration in the temporal bone are established.

After a cursory view of the historical development of these operative procedures, now practised for six years, Prof. Politzer referred to the indications which he looked upon as one of the most important points in connection with the operations in question. These depend upon the objective appearances in connection with the subjective symptoms which indicate the development of complications dangerous to life. The writer discussed, in sequence, the indications for laying open the middle ear, dwelt upon the importance of certain appearances of the drum in the diagnosis of antral suppuration and of cholesteatoma formation in the attic and mastoid, and recommended the more frequent use of the pneumatic speculum for the determination of the seat of the suppuration. The number of cases operated on by Prof. Politzer in his clinic and in his private practice, for the opening of the cavities of the middle ear, amounted to fifty-three. In this number there are not included the acute cases, and those of typical trephining of the mastoid (Schwartz) for chronic suppuration. With this enumeration are a number of cases observed which had been operated upon in his clinic by Drs. Gompertz and Kauffmann, and some elsewhere, in which he had the opportunity of judging of the results of operation. The analysis of cases operated on by Prof. Politzer is as follows :—

In four cases the cavities of the middle ear were laid open in patients in whom, some considerable time before, Prof. Politzer had performed Schwartz's typical operation, and in which recurrences with persistent suppuration had taken place ; and in nine other cases of recurring middle ear suppuration, in which the opening of the mastoid according to the typical method had been carried out by other aural surgeons. In eight cases there was, along with profuse fetid otorrhœa or granulations or cholesteatoma in the tympanum, pain in the mastoid process without swelling of the outer integuments ; twelve times pain with swelling of the skin and periosteum of that process. In eleven cases there was a sub-periosteal abscess over the mastoid, the walls of which were lined with granulations ; of these, seven had a fistulous opening in the cortex leading into the interior of the mastoid, four with no such fistula.

In eight cases there was an open fistula on the mastoid process with spontaneous dehiscence of the cortex ; in five, a fistulous opening in the posterior wall of the meatus, through which a probe could be introduced either into the antrum or into a cavity in the mastoid process filled with granulations. Extreme narrowing of the meatus from hyperostosis of the

osseous part and (unyielding) hypertrophy of the lining of the meatus was present in seven cases. In fifteen cases there was, besides the local pain in the ear or mastoid, headache, fever, occasionally sleeplessness, vertigo, and vomiting. With facial paralysis of longer or shorter duration, there were six cases which came under operative treatment, and of these three were affected with tuberculous caries of the mastoid and tympanum, with or without formation of sequestræ.

Prof. POLITZER. *A Description of the Method of Operation, and of the Modifications indicated by the different Pathological Conditions in the Temporal Bone.*

Prof. Politzer gave a sketch of the appearances found by him after laying open the cavities of the middle ear.

In about half the cases there were found masses of cholesteatoma in the tympanic cavity, in the antrum, and in the mastoid process. In fourteen cases there was immediately beneath the cortex an extensive cavity in the mastoid process, with simultaneous cario-necrotic defects in the postero-superior wall of the meatus. The cavity was filled with discoloured granulations, fragments of bone, or greasy, caseous masses. In three cases the postero-superior wall of the osseous meatus was completely lost; in five the mastoid process and the postero-superior wall were densely sclerosed. The transverse sinus was exposed to a varying extent from suppurative disease in four cases. In three cases the dura mater was exposed, once above the mastoid antrum, twice above the tegmen tympani.

In the majority of the cases the antrum and the walls of the tympanum were affected by disease of bone; the malleus and incus generally absent. On account of these conditions Prof. Politzer operated of late years chiefly according to Küster's method. Schwartze's typical opening is advisable where the hearing power is relatively good, as this is apt to be diminished by laying open of the middle ear and removing the ossicles. As regards accidents in the operation, severe hæmorrhage, from granulations or from the vessels in the bone, or from an emissary vein of Santorini, was easily checked by plugging. Once the dura mater was exposed without this producing any unfavourable effect on the reparative process. In one case during the scraping of the attic the horizontal part of the facial nerve was injured by the sharp spoon; the paresis of the facial nerve which ensued disappeared entirely after several months. In two cases in which before the operation there was paralysis of the facial nerve this entirely disappeared after healing took place. In no instance was the horizontal semicircular canal injured. The plastic methods varied according to the anatomical conditions found in the individual cases. Most often the posterior cartilagino-membranous wall of the meatus was split longways, and in order to make as wide an orifice to the meatus as possible, one flap was stitched above and the other below to the external cutis. Several times Körner's flaps were employed with good results, as also Thierch's method of transplantation. In cases of granulations in the middle ear and of cholesteatomata of small size in the antrum, Prof. Politzer allowed the operative wound behind the ear to close; but when there

were active cholesteatoma cavities in the mastoid process he kept the artificial orifice open, to allow of the more ready inspection of the seat of the disease and of the more thorough cleansing of the cavity.

As regards the result of this operative opening of the cavities of the middle ear, Prof. Politzer is of opinion that the views of many operators with regard to the cessation of the discharge after the operation—50 per cent. to 75 per cent.—are too optimistic, as the length of observation is, on the whole, still too short, and cases have occurred in which recurrence of the discharge took place after two or three years. Cholesteatoma are known to recur almost without exception. The term “radical” operation is therefore not absolutely exact of the cases operated on by him; in seventeen the suppuration had ceased for a considerable time, the remaining cases are still under observation, and the ultimate result cannot yet be determined. A certain number, as usual, have disappeared from observation. Further operations were carried out seven times. In one case the external meatus was quite closed. The duration of treatment was in general shorter than in cases of the typical opening of the mastoid process, but still required, as a rule, several months. Hearing power was generally improved by the operation, but in rare cases made worse. As after the typical mastoid opening, so also after this operation, the troublesome head symptoms were relieved and improvement in general health observed. Fatal results were observed in six cases—three times from pyæmia, which was already present before the operation; twice from chronic tuberculous otitis; and once from a cerebral abscess, without symptoms, which was present before the operation.

Prof. Politzer can only understand the extremely favourable results from this operation reported by other operators on the supposition that, without careful choice, many cases had been operated on in which there existed chronic otorrhœa without any deep-seated changes in the temporal bone, and in which the ordinary methods of treatment had not previously been tried. Such cases must obviously heal in a short time. High as is the value of these operative procedures, and life-saving as he holds the operative exposure of the cavities of the middle ear to be in many cases, he insists that these proceedings should be strictly confined to cases in which strong indications are present.

Prof. URBANTSCHITSCH. *On the Operative Exposure of the Middle Ear.*

The writer had within the last two years, from October, 1894, to the present time, observed 72 cases of the so-called radical operation in the middle ear. Of these 6 occurred in cases between the ages of 6 and 10; 17 between 11 and 15; 18 between 16 and 20; 11 between 20 and 25; 7 between 26 and 30; 7 between 30 and 40; 4 between 40 and 50; and 2 between 50 and 60. The *duration* of the purulent middle-ear inflammation had been, in 50 cases, from 1 to 10 years; in 15 from 10 to 20; in 6 from 20 to 30; and in one 32 years. Out of these 72 cases, 47 had simple caries, 13 caries and cholesteatomatous foci, and 12 pure cholesteatoma. The *mastoid antrum* showed in 42 cases no striking enlargement, in 12 it was abnormally small, in 18 abnormally large; in 5 of the latter the enlargement was “colossal,” namely, in 5 cases of cholesteatoma.

The writer remarked that the enlargement of the mastoid antrum took place at the expense of the cranial cavity. In 9 out of the 72 cases the disease extended to the *dura mater* (6 times towards the cerebellum, thrice above the tegmen tympani). In one case the dura above the tegmen was perforated, and *cerebral tissue* projected into the attic; in spite of this the patient got well. In another case cerebral tissue was found in the syringing water, and, as the operation showed, it came from the cerebellum, which had projected into a large cholesteatomatous cavity in the mastoid, which had also broken through into the meatus. His case also recovered. The transverse (lateral) sinus was frequently exposed, once in almost its whole extent as far as its passage into the bulb of the jugular vein; in many cases it was exposed by operative measures. In one case Prof. Urbantschitsch opened it, but found the sinus empty, and in its lower part thrombosed. The malleus and incus were found as follows:—

Out of the 72 cases the malleus was healthy in 8, carious in 62, absent in 2; the incus was healthy in 6, carious in 63, absent in 3; in two cases of caries there was an osseous ankylosis of these two ossicles. The *facial nerve* was in one case completely paralyzed before the operation, and in several cases paretic. The paresis disappeared quickly after the operation; the case with paralysis underwent no marked improvement. During the operative proceedings facial paralysis occurred in no instance, but in 6 it came on one or two days after the operation, but only lasted for a time. In one case the facial paresis affecting the upper eyelid passed over into a facial spasm.

Among the notable accidents during the operation Urbantschitsch mentioned the occurrence of severe arterial bleeding in two cases (from the region of the middle meningeal artery); once this required compression for ten minutes to stop it, and in the other case the operation had to be stopped and completed five days later. In the case of a girl, aged eight, there followed during the curetting of the left ear violent chronic spasms of the upper and lower extremity of the opposite side, and further spasmodic flexion of the fingers of that hand; these symptoms recurred several times during the day of the operation, but the case ended favourably. In a girl, aged eighteen, there came on after the operation general convulsions, which were repeated, but they were recognized at once as being of an hysterical nature, and the case progressed satisfactorily. In the case of a boy, aged eleven, a large sub-dural abscess was found in the occipital fossa. The case got well.

As regards the operative technique, the writer made the ordinary crescentic incision near the insertion of the auricle. The chiselling was carried out usually in the way described by Zaufal, but he never went higher than the upper margin of the meatus; the cutis of the osseous meatus was sometimes raised on the posterior and superior wall, sometimes used as a guide for the inexperienced operator while working towards the deeper parts. In other cases Prof. Urbantschitsch removed the upper and posterior part of the tympanic ring according to Stacke's method, and worked his way outwards towards the mastoid antrum. In favourable topographical circumstances safe points for guidance are in

this method presented to the inexperienced operator. For those who have had much practice in it it is immaterial what method of opening is employed, and the writer usually follows Zaufal's method. He then described the method of curetting and transplantation of skin. In several cases he had carried out the Thierch-Ziebertmann method with partial success, probably on account of the use of the pressure method, which he describes later on; on the other hand he had had very excellent results from the use of the cutis of the posterior wall of the meatus as recommended by Körner, more especially when only one incision was carried through the cuticulo-cartilaginous meatus as far as the external orifice, at which point two vertical incisions were carried upwards and downwards respectively so as to form flaps in the meatus (Panse).¹ The flaps were either attached by means of stitches or else by tampons, so that the artificial cavity was kept open as far as the outer orifice of the meatus, from which it could be easily examined.

The after treatment is looked upon by Urbantschitsch as the more difficult part of the radical treatment, and he attaches great importance to a skilled manipulation of the patient for several months. In the first rank comes the prevention of granulation formation and the destruction of granulations (too exuberant) when formed.

The tendency to the formation of granulations is to be combatted by continuous pressure upon the walls of the cavity exercised by means of a firm tampon. *The destruction of granulations* is effected by means of cauterization with crystalized chromic acid, and this has to be practised with due regard to the tendency to reaction in the individual under treatment.

As regards *the retro-auricular* opening, Urbantschitsch acts according to the nature of the case. In simple attic disease he stitches up the wound completely; otherwise he keeps a large fistulous opening by means of iodoform gauze, or a solid india-rubber cylinder, large enough to admit the little finger, until the tendency to granulation formation has passed, or is only slight and very little secretion remains. He is opposed to a permanent opening from cosmetic and social reasons, and more particularly since he has been able to obtain access to large cavities through the auditory meatus in cases in which he has slit up the soft parts of the meatus and turned back the flaps. It is only, then, in cases of very extensive caries, or in patients who are going to a distance, to places where skilled treatment cannot be carried out, that he has resort to the preservation of a permanent retro-auricular opening.

As regards the result of the treatment, he can give no positive statements on account of the short period of observation, which even in the longest of the cases has not extended over two years; but the following has been the *course* up to the present:—Of the 72 cases, 28 present a completely dry cavity, and this was attained in 13 cases in from 6 to 12 weeks; in 8 cases in from 3 to 4 months; in 4 cases in from 5 to 6

¹ This description does not tally with that which we are accustomed to recognize as Panse's method and which that writer describes in the "Arch. für Otol." This roughly consists of the formation of a tongue of soft tissue from the postero-superior wall of the membrano-cartilaginous meatus by means of two parallel incisions in the direction of the meatus. This tongue is turned backwards, so as to cover the outer part of the posterior wall of the artificial cavity formed by the chiselling operation.

months; in 3 cases in 7, 12, and 16 months respectively. In 19 other cases, of which 12 have been under observation for 6 months, and 7 longer, the cavity is completely dry; but there is occasionally a little secretion, even after a cessation of secretion for several months, but only in small quantity. In 4 patients the carious process has not yet been brought to a standstill; 8 operated on in May and June of this year showed a satisfactory course as regards the operation wound; 8 withdrew from further treatment; 5 died, and of these 3 from meningitis, which was already present at the time of operation, one of abscess in the left temporo-sphenoidal lobe without localizing symptoms, and one of metastatic pneumonia.

The operation had extremely favourable results as regards *headache, vertigo, faintness, and the general bodily condition*. Out of the seventy-two cases, forty-two had had such symptoms; among them was one of cholesteatoma with optic atrophy and marked contraction of the field of vision, which improved in a most striking way after the operation. Prof. Urbantschitsch dwelt further upon the favourable influence of the operation on the mental and nutritive functions, and further upon the *hearing power*, which sometimes was considerably improved. The writer pointed out how frequently the great danger threatening life was only discovered after the opening of the cavities of the middle ear. He concludes with the following words: "The more frequently cases of chronic suppurative inflammation of the middle ear, as also of cholesteatoma of the middle ear, are subjected to radical operation, the more clearly is the great value of this method of treatment impressed upon us, and so much the further does experience teach how wonderfully the operative interference is borne by the patient; also what favourable influence it exercises in different directions; and, in point of fact, the operative opening of the cavities of the middle ear must be described as one of the most life-saving proceedings in aural surgery."

Dr. GOMPERTZ agreed with Profs. Politzer and Urbantschitsch in looking on the radical operation of the cavities of the middle ear as a life-saving procedure, but he insisted along with Prof. Politzer that the indications for the operation should be limited in the most precise manner. In particular, he dwelt upon the necessity of attention to the hearing power, because any interference with this handicapped the patient very severely in his social relations, and in cases in which the other ear was already useless for hearing, the widest scope should be afforded to conservative methods. As regards the question whether in deeper extending disease, caries and cholesteatoma, the retro-auricular opening should be closed or kept free, he thought it could only be solved by further observations. In general he preferred the plastic method recommended by Körner, and as much as possible he avoided the establishment of a lasting retro-auricular opening; but he was bound to admit that in cases in which such an opening was kept the new epidermis gave him the impression of being more solid than in cases in which Körner's method was adopted, and he thought that the constant contact with the outer air was of advantage in securing the stability of the healing process. In order to assure the safety of the stapes he advised that the tendon of the

tensor tympani and the incudo-stapedio joint should be divided before the detachment of the auricle, because after this the field of operation was too much obscured by the hæmorrhage. For retracting the detached meatus he had found a gouge most suitable, and he recommended the use of a blunt hook hollowed out after the fashion of that instrument.

He had in one case observed tetanic contractions after the operation, but in this the anæsthetic had been administered for an hour, and the contractions soon stopped after the patient got warm in bed.

In the after treatment he recommended very strongly, in cases in which Körner's plastic method had been adopted, the use of sterilized vaseline oil. After the removal of the first dressing, cleansing and drying of the meatus, he filled this with oil, and then plugged it with iodoform gauze.

Prof. URBANTSCHITSCH, in reply to Dr. Gompertz, said that the hearing power in his cases was bad before the operation, and that after it in quite a number of cases it was improved. The operation was practised upon cases which had been long under treatment, and in which the appearances found at the operation indicated its necessity. As regards the indications it was difficult to fix them with precision, as not unfrequently it was found that the disease had extended deeply into the middle of the ear, and the mastoid process as far as the dura mater and the sinus, although no particular symptoms were present, and the patient's appearance was that of perfect health. The detachment of the posterior wall of the meatus gave rise to no great amount of hæmorrhage, and as he preferred to have as free a field of operation as possible for the separation of the incudo-stapedial joint, he therefore preferred first to remove the partition between the meatus and the mastoid. Periosteal stitches were always inserted when it seemed necessary. As regards the flap formation, he referred to his opening remarks.

Dr. KAUFFMAN advised in cases of cholesteatoma, especially when extensive or recurrent, the formation of a persistent opening behind the ear. The splendid results which he had seen from this method in Schwartz's clinic in Halle had determined him to practise the operation on a few patients in whom these indications were present; and, in particular, he called the attention of those present to a patient who, some years previously, had been operated on in Prof. Gruber's clinic, and in whom, in the September of the previous year, a recurrence had taken place with severe symptoms. After the establishment of a persistent large opening, the improvement which had taken place illustrated the great advantage of this method of operation.

Prof. POLITZER was of the opinion that, in this direction, it was necessary to specialize. When the cavity was small and there was granulation in the middle ear, the opening in the mastoid might be allowed to close. On the other hand, in the case of large cholesteatomatous cavities, the cosmetic objects had to be left in the background, and a persistent opening maintained, so that the patient might be in a position to wash out the cavity in the temporal bone, completely. If the opening is allowed to close, then the patient is under the necessity of seeking the help of a surgeon at short intervals.

Prof. GRUBER expressed his opinion that the term, "radical operation," should be done away with, as conveying no meaning. The typical operation of Schwartz, when it removes the whole of the decided tissue, is quite as radical as any other, even though not so deep. Without attacking anyone, he felt that, in many cases, too much was done. In all cases his plan was, if the presence of disease in the deeper parts of the bone was not very obvious, to perform, in the first instance, Schwartz's operation, and when in the course of the operative procedures the necessity showed itself, he then went still further. On the whole he operated frequently, and was very satisfied with the results. He objected to the maintenance of a permanent opening in the mastoid region, unless there was the most unmistakable necessity for it.

Dr. FERDINAND ALT. *On Apoplectiform Labyrinthine Disease in Caisson Workers.*

Dr. Alt had the opportunity of studying the aural disturbances which occurred in caisson workers, during the progress of certain constructions under the water-level of the Danube. The number of the cases was very large, and he confines himself to the description of the three most severe which came under his notice. These three men had worked, during the prescribed part of four hours, under a pressure of from 2.2 to 2.4 atmospheres, and while they were in the caisson they felt perfectly well. The typical symptoms of Ménière's disease appeared in these men: in one at the end of an hour, in another in thirty-five minutes, and in the third in one and a-half hours after leaving the caisson. They had complete deafness, and continuous severe vertigo. In all three there was found well-marked retraction, and more or less pronounced livid discoloration of the membrane, along with congestion of the vessels of the malleus. The tuning-fork tests indicated labyrinthine affection on both sides. In two of the patients there was complete deafness of the left side, and in the third on the right side. This remained continuous, while in the other ear a slight trace of hearing power was preserved, and improved within a few days. As regards the circumstances under which ear disturbances occur in caisson workers, the writer mentioned that men working in a space in which there is, for example, a pressure of two atmospheres, have to practise movements of swallowing and Valsalva's method of inflation (which they do instinctively), in order to drive air into the middle ear and to equalize the pressure in that cavity and outside it. When this succeeds they can go on working in complete comfort, but if the Eustachian tubes are obstructed they get severe pain and other subjective discomforts in the ear, and they are obliged to leave the caisson. Occasionally, in spite of Valsalva's method not succeeding, they persist in remaining in the caisson, and, as a result, their organs of hearing suffer severely.

When the Eustachian tube is quite impermeable there is in the auditory meatus a pressure of 1 + 2 atmospheres, and in the middle ear of one atmosphere only (or even less, on account of the rarefaction of the air resulting from Eustachian obstruction); hence there is in the middle ear a negative pressure, the membrane is drawn inwards, the vessels find

a place of less resistance, they dilate very markedly, and as the result of the obstruction to the exit of the fluids into the neighbouring parts owing to the pressure, there is a passive hyperæmia in the middle ear. As every increase of pressure in the middle ear leads also to a similar condition in the labyrinth, so rarefaction of air leads to a diminution of pressure in the internal ear (as proved by the manometrical investigations of Politzer and Bezold), and there results in the labyrinth a negative pressure with consecutive passive hyperæmia. By means of exhaustive studies of the disturbances of circulation Alt has proved that, as the result of this long continuous passive hyperæmia and the associated diminished nutrition of the vessels, there may occur a transudation, or it may be an actual hæmorrhage into the middle ear or labyrinth. In the slighter cases there was observed a retraction, and more or less pronounced injection of the membrane amounting at times to lividity. In a few of the cases there were ecchymoses in the membrane. Typical traumatic rupture of the drum was not observed. In the three very severe cases above mentioned the first idea was that there had occurred bilateral labyrinthine hæmorrhage, and it was only when the symptoms subsided with rapidity in one ear, the conclusion was arrived at that there was hæmorrhage and distraction of the tissues in one labyrinth only, whereas in the other the long-standing stasis had brought about transudation with secondary increase of pressure, so that the symptoms of labyrinthine disease were present, but disappeared when a readjustment of the secondary increase of pressure took place. In support of these views the writer alluded to the clinical symptoms on the one hand, and on the other to experiments upon animals which had been carried out in a high-pressure chamber constructed for the purpose. On the animals there were found ecchymoses of the membrane and hæmorrhage in the tympanum, or in some cases bullæ (Professor Gruber's experiment). In the microscopical preparations of the labyrinth which were shown at the meeting, it could be seen that the vessels were highly dilated, in some places even to double their natural size, and tightly packed with blood corpuscles (especially in the modiolus of the cochlea).

Dr. Alt then discussed the reason why the severe affections did not come on in the caisson, but only some time after leaving that chamber, and he attributed this circumstance to the changes in blood pressure, of which he demonstrated a number of curves. In the cases described he attributed the changes to pure mechanical causes brought about by the difference of pressure in the middle ear and the surrounding cavities, and he opposed the view that the symptoms were due to central disturbances on account of the negative results of examination of the nerves. Finally he gave a short account of the air bubble theory, and quoted a fatal case of air embolism in a caisson worker, in which there were numerous capillary hæmorrhages in the brain, and spinal cord. He asserted the possibility of the occurrence of labyrinthine hæmorrhages through the entrance of air bubbles, but as regards the cases observed he depends alone upon the mechanical theory in view of the otherwise negative appearances.

Dr. JOSEPH POLLAK. *On Serous Perichondritis of the Nasal Septum.*

The patient was a robust and well-nourished man, aged fifty-three, who, without any obvious cause or any injury whatever, had for eight days suffered from complete obstruction of the nose, with the usual consequences: loss of nasal breathing, dryness of the throat, absence of resonance in the voice, etc. On examination the external orifices of the nose were found to be completely filled by two pale red tumours, which, at the first glance, simulated prolapsed nasal polypi. There was also on the dorsum of the nose, in the neighbourhood of the articulation, between the nasal bone and quadrangular cartilage, an elastic tumour of the size of a hazel nut, which had been incised a few days before by the doctor under whose treatment it was, and out of which there exuded under pressure a yellowish-white serous fluid of somewhat viscid consistency. When an endeavour was made to introduce the finger between the ala nasi and the bulging septum, so as to define the limits of the swelling and to test its consistency, the fluid spurted out like a fountain from the tumour on the dorsum of the nose; at the same time the tension of the tumour diminished, and the patient could for the moment draw breath through the nose. Next day the tumours were again fully distended, and the incision on the dorsum had healed. Dr. Pollak decided that the case was an undoubted one of the affection named by Jurasz serous perichondritis of the nasal septum, and determined to lay open the tumours without delay. After cocainization, the tumour on the left side was opened to the extent of one centimètre by means of the galvanocautery, and two thimblefuls of serous fluid at once poured out. It was then found, as was expected, that there was a communication between the two tumours, and the use of the probe made it certain that the cartilage was broken through in a split-like way. After treatment was carried out by means of plugs of cotton wool soaked in ten per cent. Burrows solution. Complete healing took place in ten days, the nose became perfectly free; but there remained the characteristic depression of the dorsum of the nose peculiar to all forms of so-called perichondritis (phlegmon abscess of nasal septum), so that the appearance of the nose, which was previously a Roman one, was quite altered.

Dr. Pollak could not agree with Jurasz's view of the nature of such cases, that they were analogous to the perichondritis serosa described by surgeons (Ollier), and which usually occurs at the diaphysis of hollow long bones in young persons. The view expressed by Velpeau seemed to him much more plausible, who considered the disease which appeared to be the same as that described by Jurasz, to consist in a cyst formation in the septum. Fischenich avowed himself unable to give a sufficient explanation of the occurrence of serous perichondritis. Dr. Pollak thought that in serous perichondritis of the septum of the nose, just as in hæmatoma and the so-called acute idiopathic perichondritis of the septum, there was a primary diseased condition of the quadrangular cartilage analogous to that which Parreidt, Meyer, Gudden, and Pollak had described in the cartilage of the ear, and which was the condition predisposing to the occurrence of othæmatoma, namely,

degeneration of the cartilage, softening and splitting, the formation of cavities with homogeneous contents, increased and new formation of blood vessels. According to the nature of the injurious influence acting upon such degenerated cartilage, there resulted different forms of swelling of the nasal septum : thus, hæmatoma from injury, and the so-called acute idiopathic perichondritis (as Kuttner has correctly observed) from the immigration of pyogenic micro-organisms, and serous perichondritis from the rupture of cavities filled with serum. From these circumstances it will be obvious that in such cases the disease should affect both sides of the nasal septum.

Dr. GOMPERTZ. *On a Typical Change in the Tension of the Membrana Tympani in Valve-like Action of an Obstructed Eustachian Tube.*

The writer drew attention to a bleeding of the postero-superior quadrant, which now and then came under notice in membranes which were otherwise normal and without other disease of the tympanum. The patients in whom this anomaly is present generally complain of slight discomfort, such as a feeling of pressure or tension, or of slight subjective noises and occasional dulness of hearing. The appearance is very striking ; the colour of the membrane is the normal pearl grey, the light reflex is in its natural position, and the curvature of the three other quadrants is only very slightly altered. In the postero superior quadrant there is seen a marked bladder-like bulging, which at the part next the malleus stands out too sharply from the remaining portions of the membrane. On the periphery, near the wall of the meatus, there is seen invariably a longitudinal light reflex. The hearing power is only slightly affected, and in some cases is perfectly normal. The appearance under Siegel's speculum is most characteristic, as the affected part follows at once the condensation and rarefaction of the air in the external meatus, returning afterwards to its bulging position. On manipulation with the probe it feels like a miniature air cushion ; the movement of swallowing with closed nose leaves the convex position of this quadrant quite unaffected. In one of the cases Dr. Gompertz had tried the effect of multiple paracentesis, and for two days the position of the quadrant in question remained normal, but afterwards returned to its old position.

It was only by a consideration of the condition in the naso-pharynx that the writer came to associate the appearances with changes in the permeability of the Eustachian tube. The patients assert that even by the very gentlest act of blowing the nose they feel the impact of air against the drum membrane. There may therefore be perfect facility for the entrance of air into the tympanum, but some obstruction preventing its exit. In cases in which the naso-pharynx was examined there was found catarrhal conditions, hypertrophies of the mucous membrane, polypi, or suppurations in the accessory cavities. He was not quite certain as to whether in these cases certain swollen folds on the floor of the tube acted as valves, so as to allow of inlet but not of outlet of air, or whether, on the other hand, particles of mucus stuck in the narrow isthmus of the tube, so as to form a valve. He was, however, in a position to state that he had been able to remove this troublesome

abnormality partly by simple treatment of the naso-pharynx, partly by the association with it of the use of the catheter and bougie.

Dr. GOMPERTZ. *Experiments in regard to the Closure of Old Perforations.*

He had carried out Okuneff's method, and had treated a number of "obsolete" perforations of the membrane by cauterization of the margins by means of trichlor-acetic acid. The results were very satisfactory, and out of ten cases he had in four brought about cicatrization of the perforation after a few applications of the caustic, and in one of these the whole of the lower half of the drum was affected as far as the periphery. In the remaining six cases the perforations diminished very materially in size. The process was carried out under local anæsthesia, by means of a ten per cent. solution of cocaine, after which the cauterization was effected by means of the thin probe, round the point of which a few threads of cotton-wool were twisted and moistened in deliquesced trichlor-acetic acid. The treatment is painful, but is very well borne by the patients. Naturally, it ought only to be employed in those cases in which the previous application of an artificial drum has proved that the closure is not likely to make the hearing worse. The writer found the appearance of the drum, after the cicatrization, particularly interesting. At the seat of the perforation there was always formed a grey, firm, lustreless membrane, which passed over, without a distinct margin, into the rest of the membrane. This appearance proved that the *substantia propria* could undergo regeneration during cicatrization, as he had previously stated. He did not think that this action was peculiar to trichlor-acetic acid alone, but that there might be other caustics which would produce the same effect. Why six of the ten cases had not yet completely healed depended upon the fact that the duration of the treatment was still too short. In the cases in which healing took place the hearing improved considerably, and in one of them the subjective noises disappeared which had troubled the patient for two years.

Dr. HAMMERSCHLAG. *On Respiratory and Pulse Movements in the Membrana Tympani.*

The writer gave an account of the literature of the condition, referring specially to the important works of Politzer, Lucæ, Mach, and Kessel. He described his own investigations carried on by means of an apparatus of his own construction, which was similar to the one used by Mach. Out of thirty observations on four young persons with healthy ears, the following results were obtained :—

The membrane showed consistent movements, synchronous with the systole of the heart.

The drum membrane, in quiet respiration, moved outwards during inspiration ; inwards during expiration. In quiet breathing through the mouth, these respiratory movements were less distinct.

He comes to the following conclusions :—

The tympanic cavity lies, under normal circumstances, in free communication with the naso-pharynx.

The expiratory stream of air draws the air out of the tube and tym-

panic cavity, on the principle of the aëro-dynamic paradoxon, so that the drum membrane moves inwards.

The inspiratory stream presses in the tympanic cavity, and all the more easily because this is then the place of less resistance. Politzer's observations, differing somewhat from these, should stimulate to further and more extensive investigations, so that in the future the contradictions may be explained or set aside.

As regards the pulse movements, he remarked that similar observations had already been made by Politzer, Schwartze, Moos, Van Troeltsch, and others. The explanation of the pulse movements had already been sought for by other authors, and it depended upon this: that with each systole the lumen of the tympanic cavity was diminished, so that the membrane was forced outwards. He had no fresh explanation to offer, and considered this to be the correct one.

Prof. GRUBER then delivered a valedictory address.

Dundas Grant (Trans. and Abs.).

VIENNA SOCIETY OF LARYNGOLOGISTS.

Meeting, February 6th, 1896.

President—Prof. STOERK. *Secretary*—Dr. KOSCHIER.

WEIL. *Pathology and Treatment of Suppurations of the Sinuses, and especially of the Maxillary Sinus.*

After the previous discussions, the author had projected a comparative study of the various methods of treatment of suppurations of the sinuses, but has found this to be impossible, since there exist few statistics, and these contain but little detail and consequently are not of value. Nearly all authors adopt radical surgical methods, and the conservative treatment of irrigation through the natural openings succeeds only with few, who generally consider it difficult and producing bad results. Young authors go further. For example, for empyema of the antrum of Highmore they say that an opening for the evacuation of pus may be made at any point; they do not make further allusion to a natural opening. It is the same in all branches of the specialty where conservative methods, even when they may succeed, are not adopted like new operative methods, which become immediately employed. The young specialist who for the first time has to choose a method of treatment of empyema of the antrum will rather have recourse to the perforator or chisel, which will certainly give issue to the pus, and when his patient is cured he will ask if it had not been possible to avoid intervention.

Weil then discussed the results of his own experience of the conservative treatment. He has altogether met with about 96 different empyemas in 52 patients, and 23 suppurations of the maxillary sinuses in 17 patients. Of this number 7 were simple cases without complication; 5 of them were regularly treated and cured in a lasting manner, by 7, 12,

17, 30, and 41 irrigations, lasting from one week to four months. The oldest cases, which had already lasted four or five years, have been controlled after several recurrences.

Weil was opposed to the idea of the dental origin of empyema of the antrum of Highmore, which for some years has had fewer supporters, since numerous anatomical pathological researches have demonstrated the frequency of affections of the mucous membrane of the sinus in the course of various acute infectious conditions, and we have come to know much about suppurations of the other sinuses which have nothing to do with teeth, and consequent upon epidemics of influenza. We have observed a large number of cases of empyema. The author then reviewed the results of the researches of Zuckerkandl and Demochowski on the spontaneity of acute inflammation of the mucosa of the sinuses, and quoted some original observations, and others gathered from literature, which agreed with these perfectly. During the course of this year he has become convinced that most suppurations of the sinuses tend to cure spontaneously if the regular evacuation of the pus is assured, and that in his most convincing observations the original infectious suppuration has been spontaneously cured. In these cases suppuration remains from a foreign body, which is maintained by the purulent caseous mass, and which ceases when this is evacuated by a natural or artificial channel (on condition, of course, that the destruction is not too deep), just as in the case of a child with nasal inflammation and ozæna following upon a prolonged retention of a foreign body, and who is cured in a few days after its extraction. It is only in this manner that we can explain the rapid cures obtained by a number of observers by different methods; and a striking example of this was the case presented by Weil at the meeting of January 9th, where a fetid caseous empyema of the antrum, having lasted nine months, was absolutely cured by seven irrigations with hot water, notwithstanding a caries of the second molar and of the first molar with a fistula, which ceased to suppurate after the cleansing and stopping of the tooth, not performed until some weeks after the cure of the empyema.

Meeting, March 5th, 1896.

President—Prof. STOERK. *Secretary*—Dr. GROSSMANN.

PANZER contributed a section of *Laryngeal Fibroma* of extraordinary dimensions.

The patient, a florist, came to Chiari's clinic in July, 1890. He was fifty-two years of age, and had been hoarse for several months. The orifice of the larynx appeared perfectly obstructed by a tumour larger than a hazel nut, of plain surface with a few irregularities, very transparent, and mobilized by the air current. It probably arose from the right vocal cord. It was easily removed with the snare, when the upper surface of the right vocal cord was seen to present a wound extending over the

whole cord and having at its edges small mucous bundles. The tumour therefore arose from the cord and not from the ventricle. Histologically it was found to be covered everywhere with pavement epithelium. In places were seen cavities filled with homogeneous masses, colouring deeply with eosine, very probably serous exudation between the epithelium with hyaline degeneration (Prof. Kolisko). The tumour varied in appearance according to the sections. In some there was only fibrous tissue containing round cells; others enclosed bundles of tissue with serous infiltration; in others were the homogeneous masses colouring with eosine (hyaline). Fusiform cells, with large fibrous nuclei, were found, and small cavities due to the separation of tissue. The tumour was a fibroma with secondary modifications, serous transudation, softened cysts, hyaline degeneration. The degeneration is explained by the mobility of the tumour, flexions of its base, and troubles of nutrition.

WEIL continued the lecture which he had commenced at the last sitting on *Suppurations of the Sinuses, and of the Maxillary Sinus in particular*.

In order to determine the diagnosis of empyema of the antrum of Highmore, when exploratory puncture across the maxillary orifice has failed, the author practises puncture across the inferior meatus, according to Schmidt's method, a proceeding which he has found almost infallible in about thirty cases, simultaneously with the exploratory injection of Lermoyez. He finds the needles ordinarily used too large, those of 0.9 to 1 millimètre in thickness piercing the bone more easily. The point ought to be curved, because of the descending direction of the puncture, and in order to be certain in turning the needle that it is engaged in the cavity.

This is indispensable in exploratory puncture, for otherwise the liquid may be easily injected under the mucous membrane or into the cheek, which might lead to accidents, such as glandular suppurations. Severe antisepsis is *de rigueur*. When the result is positive, Weil follows the exploratory puncture by a pulverization, which ought to last until the water escapes by the nose, notably facilitating subsequent treatment across the maxillary orifice. When the empyema is assured, it is necessary to seek the maxillary orifice, and if it cannot be found immediately to partially resect the middle turbinated, removing only the edges which impede the movements of the canula in the middle meatus and prevent the finding of the maxillary orifice. The author has had recourse in about fifty cases to this small unimportant intervention.

Weil enumerated then the various objections made against this treatment, the principal of which is that the patients cannot treat themselves. However, the woman shown at the meeting of the 2nd May, 1895, had easily learnt it, and demonstrated it to the society on December 5th; and so did another patient, in whom the middle turbinated was preserved. Weil makes the canulas either fixed or movable. He had read last summer in Stoerk's volume that this author had for a long time employed irrigation made by the patients, but he had no knowledge of it before. He then explained how by careful observation—for instance, by the regular measuring of the suppurative discharge—we can draw conclusions

as to the chances of cure of the internal cavity, and deduce a probable prognosis ; and said that in order to be assured of the introduction of the canula he had had recourse to exploratory injections of substances easily recognized, such as chloride of silver and dermatol. He then discussed the various operative methods and advantages and disadvantages of conservative treatment, reviewing the most recent opinions (Ziem, Avellis, Moltenius, Jansen, Grünwald). The author has only once seen trephining through the canine fossa ; it was made in spite of him, and the affection recurred for months, with hæmorrhages sufficient to endanger life. He explains its employment only by reason of its requiring no technical skill or special instruments. He thinks it is also very regrettable in the interests of science that the results of unsuccessful treatments of these empyemas are so rarely published. The obstinacy of numerous empyemas of the antrum of Highmore proceeds but rarely from pronounced modifications of the mucous membrane and bones, but more often from the coincidence of other empyemas. He concludes that in most, perhaps in all, combined empyemas, the ethmoidal labyrinth is often the central point of the affection, and attacked primarily, but frequently, suppuration of the ethmoidal cells is avoided.

The author cited some cases, and will later on publish a complete monograph on ethmoidal suppurations. In these cases the results of treatment are naturally much worse ; the author has almost always obtained a marked amelioration, and it is only latterly, since he has directed his attention to ethmoidal suppurations, that he has observed many cures. As to the other sinuses the same remarks are applicable. Many suppurations of the frontal and sphenoidal sinuses can be imputed to empyema of Highmore's antrum. Weil concluded by remarking that the lesion of the osseous parts of the sinuses complicates and impedes the cure, and that the exposure of the natural openings and their irrigation approximates most to spontaneous cure, and constitutes the most rational treatment. It is only when at the end of several months there has been no result that it is necessary to adopt energetic methods, but the author is of opinion that the curette ought to be abolished from the therapeutics of the suppurations of the sinuses.

Meeting, 9th April, 1896.

President—Prof. STÖRK. *Secretary*—Dr. HAJEK.

EBSTEIN showed a laryngeal specimen and histological preparations from a case of *Laryngeal Stenosis due to Leucæmic Infiltration*.

Fourteen days after a violent cold severe stenosis occurred, in the course of which there was found, especially for two days preceding the tracheotomy, a rapid increase of the infiltration. Laryngoscopically the appearance was that of a tubercular infiltration. The stenosis seemed to be especially due to an extensive infiltration of the subcordal mucous membrane, extending posteriorly to the sixth tracheal ring. Histologically

there was found an infiltration of mononuclear leucocytes in the ventricle, the vocal cord, and the mucous membrane of the subcordal space. The most affected point was the subepithelium around the glands and vessels. Coloured by Grabitschewsky's method, eosinophile cells were found in the infiltration. It was particularly interesting to find Charcot's crystals in the mucous membrane of the hypertrophied ducts of the glands.

PANZER showed a patient with *Empyema of the Antrum of Highmore*, which had caused an abscess and perforation of the palatine vault. The interesting point was that the sinus could be penetrated by an opening situated near the middle line.

DISCUSSION ON EMPYEMA OF THE ANTRUM OF HIGHMORE.

ROTH was happy to hear the opinion prevailing that the affection is much oftener of nasal than dental origin. As to spontaneous cure of the empyema, the clinician could more frequently pronounce it than the pathological anatomist, for he more frequently had occasion to observe it, and we could not deny that acute suppurations were also cured spontaneously in the same manner as suppurative catarrhs of the nasal mucosa. We meet with spontaneous cures of chronic suppurations now and then, but this is not generally the case with chronic empyemas, and experience teaches that this kind of suppuration often lasts many months, in spite of careful irrigations of the cavity, without always diagnosing a complication. It is easy to understand that, consequent upon persistent suppurations of the mucosa of the sinus, excoriations occur of certain spots, and vegetations, which prolong the duration of the suppuration. It is rare to observe polypi in this cavity. As to irrigations across the natural opening, it is intelligible that this method ought to be chosen whenever we can penetrate by this opening. Two objections, however, must be raised against this method; many causes (obstruction of the opening through swellings, granulations, or polypi) hindering penetration through this opening, or a malformation of the middle turbinated impeding the passage of the sound or canula. We must not forget, also, that some patients cannot submit to prolonged treatment by the physician, and it would be necessary to teach them to make injections for themselves, which is very difficult in most cases. The author's case is an exception to the rule. Besides, when we wish to penetrate through the natural opening, it is often necessary to have recourse to operations, such as removal of granulations, extraction of a portion of the middle turbinated. I believe, therefore, that it would be essential to practise without hesitation an operation so inoffensive as ablation of a portion of the turbinated, which would allow the patient to penetrate the sinus for its irrigation. I am not a supporter of those radical operations which, originating in Germany, have been propagated here; but opening through the alveolus or extraction of a portion of the turbinated are not radical interventions, and they allow the patient to irrigate for himself and the physician to tampon the cavity with medicated wool, to swab the mucous membrane, and hasten the cure.

RETHI: This discussion had enabled him to collect his observations on chronic suppurations of the maxillary sinus, and to divide them into two groups, to judge of the exact value of various operative methods;

those of the middle meatus, treated partly through the natural orifice, partly through an accessory opening, and partly by puncture through the external nasal wall ; on the other hand, those which were opened through the inferior meatus or alveolus. These two proceedings have furnished nearly identical results, nearly forty per cent. of cures. The details will be published later on. He remarked that he did not count as cures, relief to the local sensibility or to the cephalalgia, or diminution of the suppuration, but only its complete cessation. From his own experiences he has adopted in principle, whenever possible, treatment of the maxillary sinus through the natural openings, which he has been able to sound in about half of his cases ; but when the orifice was difficult to traverse, he had opened across the external wall of the middle turbinated. If the empyema had arisen from the presence of carious teeth he opened across the dental alveolus. He did not here refer to cases where there was caries of the walls of the cavity or proliferation of the internal mucous membrane, in which it was necessary to employ some other procedure, such as large opening through the canine fossa. He could not determine according to the cases which method had succeeded the best—we can only tell later on if any treatment has been efficacious ; but we do not know under what circumstances we shall obtain a definite cure. If, after failure of treatment through the middle meatus, the patient agreed to try it, he had perforated through the alveolar apophysis, after removal of a tooth, even if it were sound ; but the patient ought to be informed of the chances of this method, and to know that a cure, though possible, cannot be guaranteed. He generally refuses the operation. It may be said in favour of the alveolar method that subsequent treatment is more simple and may be conducted by the patient, but irrigations ought not to be prolonged indefinitely ; if at the end of several weeks they have given no result they are useless. Many patients learn to irrigate the middle meatus across the large opening. Since he had reviewed his cases his previous ideas had scarcely been modified. He had retracted from radical treatment and had become conservative.

SCHEFF associated himself generally with the ideas of the previous speaker. As to the etiology, he adhered to the ideas which he had advanced in 1891, consequent upon his anatomico-clinical studies, that caries of the teeth and their roots (even admitted by those who oppose the dental origin) are almost always present, as has been remarked in the course of this discussion, and that their extraction may be recommended to allow of penetration into the sinus. He defended himself from having denied the origin of nasal empyema, since he had referred to it in the article quoted. But the appearance of empyema of the antrum cannot be considered as a proof of its purely nasal origin, because, being an infectious disease, influenza may excite trouble as well in the sinus as in the lungs, for it has already given origin to dental periostites and pulpites, not preceded with caries, when a tooth was intact externally (upper molar). As to Weil's therapeutics, he remarked that Alonelle in 1737, and Jourdain in 1765, has successfully employed irrigations through the natural openings, and that our contemporaries, Stoerk and Hartmann, have had recourse to the same method.

CHIARI said that of fifty-eight cases of empyema of the antrum of Highmore which he had observed for a long time, twenty-seven have been cured entirely and the others benefited. This is an argument in favour of his method, namely, perforation across the alveolus by a channel of three to four millimètres, irrigations, and tamponning by large bands of iodoform gauze changed once every week. Tamponning offers the advantage that the cavity is always filled with a mass slightly suppurating, so that secretion diminishes rapidly. If at the end of some months the pus has not dried up, the internal wall of the cavity is curetted, in order to remove vegetations and projections of the mucosa, which consist principally of hypertrophied and ectopic glands. This curettage is perfectly effected across the alveolar fistula. The treatment is continued until the sinus contains hardly any more mucus. The fistula is then closed by a pivot attached to a palatine prothesis, the irrigations being continued until the total cessation of the secretion. The plug is then withdrawn and diminished to allow the fistula to gradually close. The duration of the treatment until cure has been in six cases from several weeks to four months, and in the others several months. Other cases have not been completely cured, which is also frequently the case with catarrhs of other mucous surfaces.

Chiari raised the following objections to irrigations across the maxillary orifice, to which he had frequently had recourse : the introduction of the canula through the maxillary orifice is not very easy, and requires a special technical skill ; irrigation through the canula is effected with difficulty, by reason of the narrowness of the orifice ; definitive cure is also very uncertain. It is also necessary for the patient to visit the surgeon very frequently, for the process is difficult to learn.

Chiari has cured by perforation and tamponning one case which had a long time resisted irrigations across the maxillary orifice. The employment of alveolar operations and tamponning ought to be recommended.

KOSCHIER : As the method of treatment recommended by Weil has been employed for many years by Stoerk, and also at his clinic, he proposed to relate his experiences. One often succeeded very readily in sounding the maxillary hiatus through the middle meatus ; sometimes it is necessary first to amputate the anterior end of the middle turbinated, and it is only very rarely that this operation is impracticable. Having carefully irrigated the sinus, as in Weil's method, he sprayed with astringent solutions. Nitrate of silver of various strengths, three to ten per cent., had given the best effects, and he now used it exclusively. It is only when sounding of the hiatus is impossible, or that the patient could not submit to prolonged treatment, that trephining the alveolus by means of a drill was resorted to. The results are not entirely satisfactory by either method. Cure rarely persists, and recurrences are frequent at the end of a few months.

HAJEK : Weil's communication comprises two points : the treatment and the etiology of affections of the maxillary sinus. Weil's method, treatment through the natural opening—cannot be generalized, for a too pronounced curvature of the middle turbinateds, or an excessive hypertrophy of the ethmoidal bulla, often hinder the introduction of the

instrument. In cases of chronic empyema, we have to remember that numerous vegetations around the hiatus often still further impede the entry of the canula. It is then only after partial resection of the middle turbinateds, and amputation of hypertrophies of the extremities, that the orifice of the maxillary sinus is disengaged, and then it is necessary to clear the operative field of pus.

Hajek pronounced himself against Weil in the contention that irrigations can be made as easily through the natural opening as by the opposite orifice, for observations speak against this hypothesis. The determination of cure is not as difficult as certain authors have said. When the cavity suppurates no longer Hajek closes the hole, and maintains it thus from four to six weeks. When, then, the sinus remains dry, we have a sign of certain cure. Hajek does not adopt the ideas of the preceding speaker as to etiology. The opinion, based on the researches of Dmowchowski, according to which, in the course of an acute suppuration, the mucosa returns to the normal, and the stagnant pus acts as a foreign body, is not verified by practice, for our cases always concern an ulterior period where the mucosa itself is inflamed, and suppurates constantly. Hajek has often observed spontaneous cures of acute empyemas; but he is opposed to Weil when the latter contends that suppurations consecutive to acute coryzas are empyemas, this opinion wanting a basis. Hajek is not also of opinion that most empyemas of the antrum rebellious to cure have their origin in complicated ethmoidal suppurations, which fails in proof. Without doubt this is often produced, but not in all incurable empyemas of the maxillary sinus. Hajek is certain that frequently, in spite of the absence of complications, affections of the antrum are not cured. We do not know to what to attribute this peculiarity.

Meeting, 7th May, 1896.

President—Prof. CHIARI. *Secretary*—Dr. SCHEFF.

CHIARI made remarks upon the communication made at the last sitting by Panzer on a *Suppuration of the Right Antrum of Highmore*, with penetration across the palatine arch near the middle line. He made a larger opening through the inferior meatus, for there already existed a small perforation, and sounding through the maxillary orifice could not be performed. Irrigations were made through this opening until the cure of the palatine abscess. As the patient was obliged to return to his village, a small opening into the antrum was made across the alveolus, through which irrigations were made, and the antrum then tamponned with bands of iodoform gauze. This was done with the object of facilitating irrigations by a country doctor not familiar with the specialty.

WEIL terminated the discussion on suppurations of the nasal sinuses of the nose. He expressed his astonishment at the remarks made as to the paternity of irrigations across the maxillary orifice; he had quoted all the publications relating to it *à propos* of his first case, which he had

related on the advice of Stoerk. He was happy to have met with marks of approbation ; refutations of his ideas proceeded mostly from misconceptions. When Roth thinks that partial resection of the middle turbinated is often an important operation, he remarks that, on the contrary, the wall of this cavity remains intact, to which he attaches great importance, and that the wound is cicatrized in fourteen days, whilst the artificial opening ought to remain patent during the whole duration of the treatment. When Roth and Hajek raise anatomical objections to sounding, he would observe, on the contrary, that he has never met with them, in spite of the fact that he has had much difficulty in about twenty per cent. of his cases; and in the frontal sections of the nasal cavity described by Zuckerkandl, he has found nearly one-fifth of cases where it would have been impossible to sound after having attempted occlusion. He does not find any contra-indication of the operation made in a region infested with pus : it is often done for polypi, ethmoidal suppurations, etc. ; and when Hajek operates by Cooper's method, he also always makes a passage across the healthy bones into the cavity often filled with pus. He would not enter into discussion of Scheff's question as to the causes of empyema of the antrum, for he had approached this subject only from a theoretical point of view, and he would be glad if his colleagues would accept that only for cases of nasal origin, which, in his opinion, constitute ninety-nine per cent. of the whole.

As to the possibility of complete methodical irrigation across the maxillary orifice, he could only rest on his own experience ; but he would propose the following means of control : he would irrigate through the maxillary orifice in cases operated upon by Cooper's method, then withdraw the tampon from the alveolar fistula, and irrigate by this channel. According to Hajek, we can easily determine perfect cure ; but how can we control an ulterior occurrence after closure of the artificial opening ? He could from time to time control his cases, and eventually recommence treatment. His etiological views are not, as Hajek believes, based upon the experiments of Dmowchowski, but on his own clinical observations. He had already partially announced them at the meeting of the 2nd May, 1895, when he had announced his communication for the autumn, whilst Dmowchowski's work had only appeared at the end of October ; however, he is rejoiced to find that this author agrees exactly with the ideas which he had arrived at when five years ago he had cured five patients by irrigation, which decided him to treat all empyemas of important sinuses by this method. The success of this proceeding is proved by the cure of the patient shown after seven irrigations, a case which must cause his opponents to reflect. An explanation of this fact must be found. Here at the end of nine months, equally as well as in the observations recorded one or two weeks after operation, there has been no recurrence. He has not reckoned amongst empyemas all the suppurations consecutive to acute coryzas, but he has attached a special importance to the abundance of matutinal secretion (after rising), the frequent unilateral character of the suppuration, and the coincident symptoms (swellings of the cheeks, pains in the healthy upper jaw, etc.). When we completely consider the anamnesis, we meet with numerous analogous cases.

As to his clinical remarks *à propos* of complicated ethmoidal suppurations, he has said that he will embody his opinions in a memoir upon ethmoidal suppurations. He had now spoken in the hope that his colleagues might try the treatment of obstinate empyemas of the antrum. The operative method of Chiari is the one which he preferred, for it well avoids those accidents formerly recorded. He would not like an error made as to the tendency of his experiences. Naturally he had no intention of pronouncing against operations, but he desired to raise his voice against the abuse, growing more and more, of operations more or less extensive in all cases, and against the rejection of simple sounding of the orifice. This means should be first tried in all cases, and, as Killian remarks, we shall derive results increasingly satisfactory from its practice.

HAJEK. *The Pathological Modifications of the Ethmoidal Cells in Inflammations of the Nasal Mucosa (Necrosing Ethmoiditis).*

Woakes, in 1885, for the first time approached this subject. He spoke of a particular affection of the middle turbinated, commencing in hypertrophy, and producing, as a consequence, a necrosis of the osseous lamellæ. We see nasal polypi develop which may often give rise to abscess of the maxillary sinus.

Although in the same year Woakes completed his memoir and added microscopic plates to facilitate its comprehension, his work has been much attacked, and few authors have adopted his ideas. The words which end Woakes' work are very important as to the question of nasal polypi, for they say that these polypi are not primary affections, but a sign of necrosing ethmoiditis having commenced in alterations of the mucosa. Unfortunately Woakes' article was so ill-expressed and his figures so confused that his researches have been either passed in silence or judged very severely. Semon has placed a point of interrogation before his hypotheses, and M. Schmidt observed that he saw in the communication of the English author a series of diverse affections united under the name of one affection. Zuckerkandl has refuted, in a logical fashion, Woakes' results, saying that he had never met with osseous necrosis in any case of nasal polypus, but that on the contrary, the osseous parts situated at the base of numerous polypi were lengthened and softened. In spite of these contradictions Woakes did not cease to seek for new proofs of his views. In 1889 he published new researches, the interest of which consisted especially in the fact that the anatomical portion of them was conducted by Martin.

These investigations showed that in twenty specimens there were met with two cases of osseous necrosis, ten times partial absorption, and in eight cases the bones were intact. After this Woakes anew promulgated his necrosing ethmoiditis, although it was clear that Martin's researches did not prove the existence of a necrosing ethmoiditis.

In recent works Woakes' theory has not recruited any more followers, although Grünwald is said to have met on many occasions with necrosis in the living subject. The Annual Meeting of British Laryngologists in 1895 demonstrated the diversity of ideas on this point. Most speakers pronounced themselves against the opinions of Woakes, and

denied the existence of necrosis and its participation in the formation of nasal polypi. Whilst up to now the discussion had borne on the question of absence or existence of necrosis in nasal polypi, Zuckerkandl has opened a new horizon by the statement that the osseous layer situated under the polypi and the hypertrophies is itself hypertrophied—that is to say, that its condition is just the contrary from what Woakes contends. The author has made researches upon the living subject, which has the advantage of presenting at the same time the clinical picture. He has examined seventeen cases of hypertrophied degenerated turbinateds, and twelve cases of polypi with their osseous apophyses. The latter is obtained by evulsion. The hypertrophies and the polypi presented in some cases the appearance of profuse rhinitis, in others they were accompanied by empyemas of secondary importance. To the touch of the probe certain hypertrophies revealed a slight friability of the subjacent osseous layer.

In order to understand the anatomical conditions we ought first to undertake a preliminary research upon the normal mucosa and the bones which are connected with it, of which the principal points are here reproduced. If we examine an entire middle turbinated in order to study the relation of the mucosa and the bones, we shall be struck by the spongy character of the osseous portion. There exist large and small spongy spaces, and there is always a large cavity of the middle turbinated. It is very important that the large and small spaces should be open largely in diverse spots from the surface, in such a manner that the medullary spaces, often repeated, form a solution of continuity with the mucous investment. Most of the medullary spaces contain a little fat, and consist especially of cicatricial areolar tissue and medullary cells; others contain more fat, whilst some contain both. The importance is that there does not exist any contact between the deep layer of the mucous membrane and the medullary tissue, so that an inflammation of the mucosa cannot penetrate into the medullary space. The other parts of the ethmoidal bones offer the same spongy character.

Microscopic sections of the middle turbinated, of the ethmoidal labyrinth, and of the uncinate process were presented, in which are distinguished the relation between the mucous investment and the medullary spaces. In the normal condition it is easy to understand pathological modifications. We can, according to their intensity, divide into three categories the changes observed in excised inflamed turbinateds. The first class comprises infiltrations of the surface of the mucosa, when the deep layers are intact. The second class can be designated deep inflammation, because it is characterized by an infiltration, not only of the whole thickness of the mucosa, but also of all the medullary spaces which are connected. Sections are shown.

In these cases of deep inflammation the whole turbinated is infiltrated, and in the middle of the inflamed tissue the osseous trabeculae remain intact. It is easy to understand that when the periosteum and the medullary spaces are infiltrated, the bones cannot remain indefinitely normal. In most cases of prolonged inflammation, there are produced osseous modifications of two kinds—hyperplasias and rarefactions; these

latter may be considered as the third class of modifications. It will be recognized in all the sections that the osseous changes are only the result of inflammation penetrating from the surface into the depths, and never is there seen any osseous modification without participation of the soft parts.

Of seventeen cases of hypertrophy of the middle turbinated examined, six presented only a superficial inflammation of the mucosa, eleven a deep inflammation, extending also to the medullary bone: three cases presented an osseous hyperplastic tumour, and in four cases rarefaction was clearly seen—that is to say, the lacunæ of Howship and osteoclasts. In the latter cases the osseous trabeculæ were thinned out, and the medullary spaces enlarged. We remark that in most cases of osseous modifications there is never hyperplasia or rarefying osteitis, but both at the same time, a fact which has been long since known by anatomists. The details of microscopic examination will be furnished by sections and drawings.

Hyperplasia is due to the excitation and proliferation of periostitis allied to congestion of the mucosa, whilst rarefying osteitis proceeds probably from nutritive trouble of the bones arising from accidents of circulation. The latter are explained easily by the cellular infiltration of the medullary spaces and partial compression of the veins. It follows from these researches that rarefying osteitis does not play a preponderant role, but is accessory in the course of inflammations penetrating from the surface downwards. Woakes has therefore committed a great *lapsus linguae*, when he places necrosis, or, rather, rarefying osteitis, in the first rank of manifestations indicating the presence of polypi. What has been said as to hypertrophies applies equally to polypi; it follows that the latter are only an œdematous hypertrophy. Of the twelve cases examined, four presented superficial modifications of the mucosa, and eight a deep inflammation, *i.e.*, an infiltration of the subjacent osseous layer; in two of these latter hyperplasia was found, and in three cases an important rarefying osteitis. Here, also, rarefaction of the bones is only accessory, and has no characteristic value for polypi, for the latter, before everything, originate in inflammation of the peripheral mucous layers. There does not exist any example proving the dictum of Woakes, who affirms the contrary, *i.e.*, the origination of polypi from the medullary spaces.

At the close of his communication on necrosing ethmoiditis, Hajek made some remarks upon the appearances of œdematous medullary tissue in amputations of the middle turbinated. This tissue may easily be confounded with a polypus, and differs only in the absence of a solid envelope (mucosa and epithelium).

The presence of this particular tissue explains how this tissue, meeting with slight resistance (the open spongy space of the middle turbinated), is inflamed, and easily becomes œdematous.

In certain circumstances cannot a polypus be attributed to primary inflammation of the medullary spaces? This idea ought not to be dismissed *à priori*, but we must observe that there exists no proof of this opinion. It might be possible, also, that obstinate recurrences of inveterate polypi might be explained, at least partly, by the infiltration of

the spongy characters. Perhaps the base of the polypus is formed of osseous trabeculae separated by infiltrated medullary spaces offering little resistance, and disposed to become inflamed from their facility of excitation. This latter idea, however, can only be considered to be hypothetical. As to the relations of rarefying osteitis with necrosis and caries, there is never any formation of a sequestrum, for the osseous tissue is absorbed and lost in the medullary space ; this is not a caries, for the absorption of osseous portions never provokes ulceration or destruction. We may compare the osseous rarefactions with the absorption of the turbinated bones in atrophic rhinitis ; it is never followed by the formation of any sequestrum, or with ulcerative destruction. The author will publish a detailed memoir in Fraenkel's "*Archives für Laryngologie.*"

DISCUSSION.

WEIL asked if in his sections Hajek had not found places where the mucous membrane left the bones exposed, and where one would not have been able to feel it with the probe ?

As to Hajek's hypothesis as to the recurrence of nasal polypi, Weil believes the clinical explanation to be very easy. On extracting a polypus and removing an osseous fragment we very often find the other side (the middle turbinated or the internal surface of an ethmoidal cell) occupied by small polypi ; it is, therefore, the remaining mucous membrane of the meatus, and of the ethmoidal cells, which furnish new polypi. Operators who extract the polypi with the cold snare and timidly preserve the bones have frequent recurrences. Weil is glad that Hajek has often found the bones affected, for he has always believed in the existence of a rarefying osteitis in cases where the bones were friable and were easily removed with the polypus. It is difficult to determine if the osteitis is primary or secondary ; and at the meeting of naturalists in Vienna in 1894, the author admitted the opinion that those questions would be solved by the histological examination of osseous parts extirpated on the living subject.

PANZER, in opposition to Hajek, said that polypi might arise from other causes than sanguineous deposits and consecutive œdema, because on histological examination many polypi exhibit not only an œdema, but other important modifications : hypertrophy of the mucous glands, etc. As to the appearance of œdematous masses at the point of rupture of the anterior extremity of the middle turbinated, which Hajek considers to be an œdema of the medullary bone consecutive to excision, Panzer remarked that we often meet with small polypi consequent upon the extraction of osseous parts of the anterior extremity, and that they proceed from a cavity of the middle turbinated, which is opened at the same time as the bones in removing the anterior extremity.

ROTH : Panzer has badly misunderstood the author, for the latter has clearly explained that the polypoid vegetations appearing a little time after the amputation of the anterior extremity of the middle turbinated are not polypi covered with mucous membrane and epithelium, since they disappear when they are enclosed in the snare ; they are rather an œdematous medullary substance. The tumours existing in the turbinated

are often polypi, as Panzer had observed in the course of an old nasal suppuration after amputation of the anterior extremity of the middle turbinated with the snare, and which case he had published *in extenso*. Moreover, we know that we frequently meet with true polypi in the ethmoidal cells, and that a bulla of the turbinated is nothing more than an ethmoidal cell, which makes the existence of polypi nothing surprising.

CHIARI said that osseous wounds are always covered with granulations, which is often seen after removal of spines of the septum. Contrary to Weil, he would advise, in evulsion of the polypus, not to attack so resolutely the ethmoidal bones, because the old surgical method, consisting in removing the turbinateds with forceps, did not preserve from recurrences. We should not fear to remove some osseous fragments at the base of the polypus, and to open the ethmoidal cells when they give origin to polypi. The principle is always to extract polypi even when small, and to remove all hypertrophies which might produce polypi. Chiari is of the same opinion as Hajek, that polypi and hypertrophies proceed from a chronic inflammation, in which the bones may participate, as Hajek has shown. Chiari observed that in the large naso-pharyngeal polypi it is not rare to meet with osseous lamellæ, having no relation with the bones at the point of implantation (for example, the middle turbinated); moreover, there almost always exists chronic inflammation of the soft parts of the bones of the neighbouring parts; so that participation of the ethmoidal cells in inflammation of the soft parts surrounding the polypus need not surprise us.

HAJEK: The œdematous tissue proceeding from the medullary spaces has nothing to do with polypi of the degenerated turbinateds, or of the ethmoidal labyrinth; the latter are true polypi, while the former have no envelope. He has never believed that polypi result from an œdema, but that they are an œdematous hypertrophy, an opinion generally adopted by rhinologists of the present day. He must answer negatively as to the existence of cases where the bones were naked and mucous ulcerations discovered, for in cases not complicated with syphilis or tuberculosis the author has never found ulcerative destruction or denuded bone, which would not alter the possibility of the opening of an empyema being able to give rise to partial necrosis of the mucous membrane and bones. The author's present work has been particularly concerned with typical modifications, and not accidental complications.

Meeting, June 11th, 1896.

President—Prof. STOERK. Secretary—Dr. GROSSMANN.

CHIARI exhibited a man, fifty-two years of age, who since February, 1895, had had hoarseness and pains in the left shoulder and half of the head. These symptoms were then attributed to an aneurism of the arch of the aorta, and a total paralysis of the left side of the larynx with

cadavellic position of the vocal cords was observed. Since about six weeks the left ventricle has commenced to move posteriorly during phonation, whilst the concave true vocal cord and the arytenoid cartilage remain completely immovable. This peculiarity is still observed. Similar facts have already been observed in cases of recurrent paralysis; but this case is interesting, because since the onset of recurrent paralysis the left half of the larynx has been entirely immovable, and it is only much later that the ventricle has recovered its motility. Perhaps there was here a participation of the recurrence in the atrophy depending upon the aneurism. The patient will continue under observation.

STOERK gave a historical retrospect of the development of œsophagoscopy, accompanied with demonstrations of various instruments which he has employed. He gave a long description of an œsophagoscope with an articulated handle recently perfected by him. The instrument is introduced, curved like a bougie. He demonstrated its use on two patients.

EBSTEIN showed an instrument which he employs for endoscopic dilatation of caustic strictures of the œsophagus which resist the treatment of bougies or catgut introduced through the mouth. The dilatation is effected by tents of laminaria, introduced into the œsophageal tube by the aid of a simple instrument under the control of the eye. This instrument consists of a narrow sound (13 *chavière*) 15 centimètres long, to the extremity of which is adapted a conductor furnished with two branches of small forceps. These latter are dentated on the edges. The other extremity is furnished with a screw controlling the movement of the branches, and curved to an obtuse angle so as to be better manipulated. It might be attached to a handle, which would not affect its weight. In the tubular forceps are inserted long and thick tents of laminaria and a solid thread of silk, which is fixed by a knot. With a little practice the introduction is easy. The instrument and the tube are then withdrawn, leaving the laminaria tent in the *stend partose* until it is necessary to remove it through the mouth by the aid of the silk thread. The application can be made for a more or less long time, without having to fear the effects of dilatation provoked by Senator's method. This method is especially suited to narrow strictures otherwise impermeable. It is less suitable for cancerous strictures. It succeeds perfectly in annular and short tubular strictures, and it can also be employed in disseminated stenoses, in order to dilate the uppermost parts, and practise introduction of bougies into the deeper parts.

EBSTEIN showed a child of seven years of age, in whom in four sittings he had succeeded in dilating the orifice of the annular retracted parts, which would not allow catgut to pass, with the result that he had abandoned a projected gastrostomy.

CHIARI showed a large soft tumour, six centimètres long, four centimètres broad, and five centimètres thick, which rose from the aryepiglottic fold and descended to the second tracheal ring. On the patient it changed form. By reason of its dimension and the numerous vessels that it enclosed, Chiari extirpated it by laryngo-fissure.

R. Norris Wolfenden.

MEETING OF SOUTH GERMAN LARYNGOLOGISTS IN HEIDELBERG.

(From the "Münchener Med. Wochenschrift.")

Dr. ALFRED KIRSTEIN (Berlin). *Autoscopy of the Air Passages.*
(See Abstracts.)

Dr. AVELLIS (Frankfurt). *Acute Empyema of the Antrum of Highmore, and its Spontaneous Cure.*

Having pointed out that acute empyema is much more common than is generally supposed, and having indicated why so many cases are not recognized, the author cited some of his own cases. Zarniko's statement that the symptoms of acute empyema correspond to those of the chronic cases, is not at all correct. Œdema of the cheek and eyelids, or of the cheek alone, is an important symptom. From his own experience, and from the cases reported elsewhere, Avellis draws the following conclusions :—

1. Acute empyema of the antrum is very common.
2. There are severe and slight cases. Of the latter several have been reported in England ; of severe cases I could find no reports, although, doubtless, many must have been observed.
3. The characteristic symptoms of the slight cases are : painful sensations of pressure and tension in the upper jaw ; purulent, sometimes hæmorrhagic, discharge, of an irregular atypical character ; the pain is increased by pressure, by coughing, or by straining ; the secretion does not cease entirely during the night ; soft œdematous swellings of the cheeks and eyelids frequently occur ; the œdematous part is at times bright red ; supra-orbital pain is rare, and bad smell is frequently entirely wanting.
4. The severe have all the symptoms of the slight cases, with, in addition, pretty high fever, apathy, photophobia, so great prostration and illness that patient stays entirely in bed, very profuse secretion, nausea, vomiting, mental faculties dull. I have seen such severe cases arise both from influenza, and also spontaneously.
5. Acute empyema readily returns. An ordinary cold in the head is enough to set up a fresh attack.
6. Bilateral empyema was as common (in my experience) as unilateral.
7. I only once saw an acute case pass into the chronic stage.
8. Acute empyema can give rise to polypi.

My opinion with regard to the spontaneous cure of acute antral empyema may be formulated thus :—

Slight cases almost all heal spontaneously ; but recurrence is common. This may take place weeks or years later.

(The presence of empyema, and also of the cure, was established in all my cases—myself excepted—by washing out the antrum from the inferior meatus.)

Recovery is gradual. The first sign of improvement is that the pain

comes on later each day, and gradually diminishes, and the discharge gets less in quantity and less purulent in character till it finally ceases.

In those cases that require treatment, the antrum is to be syringed out; and it seems to me a matter of indifference whether this is done through the inferior meatus, through the natural ostium, through the alveolus, or through the canine fossa. The rapidity or slowness of cure depends, not on the method of irrigation, but on the nature of the infection. This, again, doubtless depends on the kind of bacteria present; but on this point we as yet know nothing definite.

I hope that my paper may have the effect of putting a stop (1) to foolish and misleading reports of the rapid cure of empyemata by this or that method of treatment; (2) to the mixing together of the symptomatology and prognosis of acute empyema with those of the very widely different chronic condition.

G. KILLIAN (Freiburg). *Exploratory Puncture of the Nasal Accessory Cavities.*

The only reliable method of diagnosing empyema of an accessory cavity is by syringing or blowing out the cavity. The latter is useful where pus or mucus is present in small quantities, or where the fluid is serous, because in these cases the fluid from the cavity is lost in the fluid from the syringe. The antrum of Highmore can be punctured with a pointed Hartmann's canula in the middle region of the middle meatus. Under cocaine the patient is not aware that anything special has been done, and the danger of wounding the orbit is very small. During three years, during which I and my assistants have made use of this method, we have never wounded the orbit.

The sphenoid sinus can often be sounded, and its natural opening entered by a canula. When this is not the case, its anterior wall can easily be pierced, even with a blunt instrument, as Schäffer has shown. Further, it is not always impossible to enter through the inferior wall with a right-angled instrument.

The ethmoid cells are more difficult to deal with. They all lie along the olfactory slit and can be entered from it, there being only a very thin bony wall to penetrate. In doing this one must keep above an imaginary line drawn from the top of the choana to the anterior end of the root of the middle turbinated. The instrument to use is a canula with its point bent at a right angle, the bent portion being just long enough to penetrate the thin median wall of the cells. With this instrument there is no fear of wounding the orbit.

If the space between septum and middle turbinated is too narrow, one must get at these cells from the middle meatus. When the middle meatus is fairly wide one can reach anterior, middle, or posterior cells with a canula bent upwards at the point at a right angle. If one keeps to the bend of the middle turbinated, avoiding its lateral point of origin, and works straight up, it is impossible to wound the orbit; but to avoid the danger of wounding the cavum cranii the bent portion of the instrument must not be more than half to one centimètre long. By the one route or the other every cell can be reached.

Only in a small proportion of cases can one sound the frontal sinus without a preliminary operation. Schäffer's method of entering through the floor, from between the middle turbinated and the septum is too dangerous. In most cases the anterior end of the middle turbinated must first be removed—a simple and generally permissible operation—and thus the road cleared for a blunt canula.

KLEMPERER (Strasburg). *On the Bacteriology of the Nose.*

StClair Thomson and Hewlett have shown that in about eighty cases the cavity of the nose is germ-free, and that only the vestibule contains numerous bacteria. Klemperer does not agree with them, but maintains that in healthy noses, while it is true that bacteria are to be found in quantity only in the vestibule, still no part of the nose is germ-free. Let the anterior parts of the nose be thoroughly sterilized with perchloride of mercury and washed out with sterilized water, then wipe out the parts higher and deeper in with sterilized cotton-wool swabs. These (the swabs) always bring away a few germs, from which two, three, four, or more frequently six, eight, ten colonies can be cultivated.

Klemperer cannot confirm the statements of Wurtz and Lermoyez as to the bactericidal properties of nasal mucus. Unlike these authors, he experimented not with anthrax bacillus, but with the bacteria which he had previously cultivated from the nose whose mucus he was testing. At first they did not grow well, and even diminished to some extent in number, but soon grew accustomed to the mucus and multiplied in it.

Extinction was never observed.

JURASZ (Heidelberg) presented a patient with a simple *Tracheal Polypos*.

HEDDERICH. *Clinical Experiences with Paramonochlor-Phenol in Laryngeal Phthisis.*

A year ago Dr. Spengler of St. Petersburg warmly recommended this drug. He experimented with it on pure cultures of tubercle bacillus, testing these afterwards on guinea-pigs; further he applied it to twenty-six patients, and reported ten cures.

We have treated thirty patients with paramonochlor-phenol in Professor Jurasz's clinic, and can report fair results. All the patients admitted that their condition had improved, usually after the first two applications. The dysphagia and irritability of the throat specially disappeared, and breathing became freer; ulcers became clean, and slowly healed; oedema and infiltration gradually grew less. In serious progressive cases no improvement took place. Two cases seemed to be cured, but as we have not seen them lately we cannot speak of them with any certainty. In three cases the treatment had to be given up, because nausea and vomiting came on regularly after each application of the drug. Along with this treatment general treatment was used, but purposely all operations were avoided.

Paramonochlor-phenol is phenol in which one H is replaced by one Cl.; it is little soluble in water, but freely in glycerine. We used a ten per cent. solution in glycerine for the larynx, a twenty per cent. for the

nose and pharynx; the latter causes a white slough, like acid. carbol. liquefact.

While the results are by no means brilliant, they justify further investigation and trial of the drug.

LUBLINSKI (Berlin) had tried chlor-phenol, but had given it up again; its advantages were outweighed by its disadvantages.

SEIFERT (Würzburg) had given it up as far as the larynx was concerned, but still advised its use in tuberculosis or lupus of the nose.

PROEBSTING (Wiesbaden). *On Operations for Malignant Tumours of the Naso-pharynx.*

After some introductory remarks the author reported a case of naso-pharyngeal fibro-sarcoma in a peasant of nineteen, which he and Herr Sanitätsrath Cramer had had under their care.

The patient had suffered during the winter from repeated, violent epistaxis, and in March consulted Dr. Scheben. He removed several polypi from the nose, but, owing to the violent hæmorrhage this operation set up, had to send the patient to hospital. The author then saw patient, found the left naris blocked, and left side of naso-pharynx greatly narrowed by a tumour. From this he removed with galvanic snare a piece as large as a walnut, which proved to be fibro-sarcomatous. Cramer was called in. He first performed tracheotomy, and introduced a modified Trendelenburg's canula. Then he split the soft palate and the mucous membrane and periosteum of the hard palate, in the middle line, and with a chisel cut off the posterior portion of the hard palate. A free view was thus obtained of the naso-pharynx, and of the nose as far forward as the middle of the inferior turbinated. It then appeared that the tumour could not be removed from below, because it adhered firmly to the upper lateral wall of the nose. Temporary resection of the nose was therefore performed, after firmly packing the naso-pharynx and posterior half of the nose. The skin incision extended from the angle of the right eye, across the root of the nose, down the naso-labial fold, and straight back across the upper lip. Then the nasal bone and the proc. nasal. of the superior maxilla were chiselled through, and the nose turned over to the right. The tumour (about the size of an apple, and having many polypus-like processes) was then seized both from in front and from behind and below, loosened from its base, and shelled out with a large Lorentz's spoon. With this the bleeding, which had been considerable, ceased. The nose was firmly packed with iodoform gauze, and the external wound and that in the soft palate exactly stitched. The tracheal canula was left in till the evening. The result was in every respect satisfactory. As yet no recurrence; but the operation was done only two months ago.

Discussing the question of recurrence, the author narrated a case observed by Cramer and himself. Cramer had removed a naso-pharyngeal sarcoma from a forty-eight-years-old woman. A few months later this recurred, and grew so rapidly (completely blocking the nose, and both Eustachian tubes, with resulting deafness, and driving forward the left bulbus) that death seemed certain, and was daily expected. Without any apparent reason spontaneous shrinking of the tumour set in, the eye

returned to its normal position, hearing was restored, and the nose cleared, and the woman is now alive and well (*i.e.*, six years later). The diagnosis of sarcoma had been confirmed by the best microscopists. This tumour must not be confounded with the naso-pharyngeal fibroma of young people, which is probably commoner than is generally supposed.

ROSENFELD (Stuttgart). *Demonstration of a Laryngeal Carcinoma.*

The patient was a woman eighty-one years old, but very healthy and strong. Up till March, 1895, she had always been healthy. At that date commenced to suffer from hoarseness and cough, to which a few weeks later was added dysphagia; still later, shortness of breath and stabbing pain in the right ear. I first saw her on 12th September, and diagnosed carcinoma of the larynx, which, originating in the thyroid cartilage, had already spread through the corda vocalis to the arytenoid cartilage. Nothing abnormal to be found external to the larynx. Operation, even tracheotomy, refused. On 14th October tracheotomy permitted and performed. Up till then only fluids had caused pain in swallowing, but thereafter nothing but fluids could be swallowed; by January 14th even they could no longer be taken. Still, life was prolonged (on water and nutrient enemata) till February 15th.

DREYFUSS (Strasburg) demonstrated a specimen of *Flat-Celled Epithelioma Laryngis*, which, apparently originating in the right sinus pyriformis, had perforated the lateral laryngeal wall, and appeared as a granulating tumour above the right false cord. Partial resection. Death four days later from pneumonia. Several cancerous glands as large as cherry stones, which had not been noticed at the operation, were found *post-mortem* deep in the neck.

KIRSTEIN (Berlin) showed an instrument for *Removing the Pharyngeal Tonsil*.

KILLIAN (Freiburg) showed a *Rheostat for Galvano-Cautery*, worked by foot, and enabling the operator to turn the current off or on, and to increase or diminish it, while actually using the cautery or canterysnare.

It is made by Ellis in Freiburg.

Arthur J. Hutchison (Trans. and Abs.).

BERLIN LARYNGOLOGICAL SOCIETY.

Meeting, January 17th, 1896. (Reported by Dr. MEYER.)

(Continued from page 225.)

GLUCK presented:—(1) Patient, aged thirty-six, whose larynx had been partially removed for carcinoma. (2) Patient, aged fifty-six, whose larynx had been entirely removed. Gluck recommends the procedure he adopted in this case—viz., to stitch the trachea to the skin after it has been divided transversely; in this way the aspiration of secretion from

the wound is avoided. Healing takes place without any disturbance. Introduction of an artificial larynx (Wolff). In three or four weeks the trachea is replaced.

B. FRÄNKEL considered that this method was not always practicable. He mentioned a case in which there was no room between the cricoid and sternum owing to kyphosis.

KIRSTEIN demonstrated :—(1) A new instrument for operating on adenoid vegetations. (2) A forehead mirror with new form of attachment. (3) A contrivance (diaphragm) to prevent dimming of the eye-glasses during examination, especially autoscopy. (4) Man, aged twenty-five, with separation of the plates of the thyroid in consequence of thyrotomy which had been performed twenty-three years previously. By pressing the plates together the voice was improved. (5) The patient on whom the first operation was performed by aid of autoscopy.

B. FRÄNKEL had two cases of this kind which had been cured—one was operated upon by Bramann, the other by Israel. In other two cases a good result was not obtained owing to the size of the defect and the brittleness of the cartilage.

E. MEYER remarked, in regard to the first patient operated upon by aid of the autoscope, that the improvement in the voice was not due to the removal of the small nodule, but to the passing off of the recurrent paralysis previously present.

FLATAU found Kirstein's instrument for operating on adenoid vegetations less suitable than Gottstein's, which is narrower, and, therefore, better adapted for obtaining the specimen and for palpation of the nasopharynx.

B. FRANKEL feared that Kirstein's instrument would injure the soft palate.

HERZFELD demonstrated a patient with a tumour at the point of the tongue.

Meeting, February 28th, 1896.

SCHADEWALDT showed a patient in whom one vocal cord appeared red and thickened in its entire length. As the lungs were free, and there were no bacilli in the sputum, and, lastly, on account of the laryngoscopic appearance, he did not consider it tubercular; and yet there was nothing pointing to syphilis. The patient had coughed up fibrinous masses for a long time.

B. FRÄNKEL asked if they might not have to deal with influenza here, although the long duration of the affection disfavoured this view. He recommended iodide of potassium and tuberculin as aids in forming a differential diagnosis between syphilis and tuberculosis.

HEYMANN showed photographs taken by Einthoven, of Leyden, of the throat of a patient in whom half of the superior maxilla had been resected. The views represented the parts :—(1) At rest; (2) while "a" was being said; (3) during sucking; (4) during swallowing.

FLATAU remarked that photographs may also be taken when the nose is somewhat wide.

HERZFELD related that the tumour at the point of the tongue (case shown at a former meeting) proved on microscopic examination to be a papilloma. In addition, he showed a patient, aged forty-three, with two tumours as large as peas at the point of the tongue close to the middle line. The patient attributed the origin of these papillomas to his having torn warts from his fingers with his teeth when eight years old.

A. ROSENBERG. *Treatment of Goitre by Injections of Iodoform.* In a number of cases Rosenberg has injected twice or thrice weekly one-half to one cubic centimetre of iodoform solution (iodoform 1·0; ether and olive oil $\bar{a}\bar{a}$ 7·5) into the struma, and on the whole has obtained very good results. The patients were of all ages. The goitre was nearly always parenchymatous, and in some cases had caused stenosis of the trachea. In some instances the stenosis disappeared after a few injections. In all the cases the struma diminished. The number of injections and the time required varied greatly. After the injections the patients complained of pain—which usually passed off quickly—of a bad taste, and cough. No severe disturbances or dangerous symptoms were observed, so that Rosenberg recommends the method warmly.

HERZFELD referred to eight cases treated with iodoform. In six the goitre diminished four to five centimètres, and the patient experienced a marked improvement. After a few injections he recommends an interval.

FLATAU injects only when surgical treatment is inadmissible; his material, consequently, is small. The iodoform injection acts by the large quantity of iodine. He has seen good results obtained by rubbing iodine, in an easily absorbed form (iodine vasogene), into the skin.

HERZFELD attributed the results of the inunction of iodo-vasogene to the massage.

DEMME showed a patient who had suffered for fourteen days from difficulty in swallowing, which had gradually increased. A tense swelling is seen below the ear, extending to where the hair begins, and beneath it a second. The skin is stretched and not movable. The speech is thick. The left side of the palate is occupied by a tumour as large as a fist, which reaches to the middle line and passes to the posterior wall of the pharynx. The uvula is pushed to the other side. The growth rests on the base of the tongue and extends to the pyriform sinus, so that the epiglottis is pressed to the right and backwards. The larynx also is pushed to the right. The growth reaches upwards to the Eustachian tube. It is tense and elastic, as externally. On making a bi-manual examination, the connection of the outer and inner swellings becomes evident. A small incision led to a very profuse hæmorrhage (1·5 litres), which ceased only after compression for five hours. The growth was a very large hæmatoma.

Meeting, 17th April, 1896.

KUTTNER reported two cases in which, after the use of Noortwyk's drops—a secret remedy for diphtheria—the mouth and pharynx presented

severe cauterizations. They had taken, according to the directions, sixty drops in milk on two occasions.

FLATAU. Patient with *Caries and Necrosis of the Ethmoid, Syphilis of the Nasal Bone*. He had had syphilis for thirteen years; for one year the nose had been affected. Without experiencing any previous discomfort the left inferior turbinate was expelled in a necrosed state. For some time sequestræ, which were probably derived from the ethmoid, have come away from the right side.

B. FRÄNKEL showed a *Cotton-Holder*, with a bend suitable for the naso-pharynx, which can be introduced more easily than Baginsky's instrument.

FLATAU. Patient with *Hydrorrhœa*, which was said to have originated from the galvano-cauterization of the inferior turbinate. The naso-pharynx was filled with adenoid vegetations.

HEYMANN demonstrated :—(1) *A Polypus removed by Autoscopy from the False Cord*. (2) Patient, aged twenty-five, healthy until four weeks ago, when he suffered from want of air and slight hoarseness. After treatment of the hypertrophic rhinitis, the difficulty in breathing passed off. The mucous membrane of the pharynx and larynx is pale. The left false cord is transformed into a nodulated mass, and ulcerated in its posterior part. The left true cord is infiltrated, and presents small nodular excrescences. The upper third of the epiglottis is absent, the remainder is nodulated, thickened, and ulcerated. Iodide of potassium has produced no result; the ulcers, on the other hand, healed under the lactic acid treatment. The microscopic examination of nodules that have been removed showed numerous giant cells; the epithelium thickened; no tubercle bacilli. From this examination Heymann diagnoses lupus.

GRABOWER did not consider the diagnosis established. The microscopic picture was not conclusive. He himself had seen a case in which the larynx and an ulcer gave the impression of lupus, but which had healed under inunctions.

B. FRÄNKEL recommended a trial injection of tuberculin.

HEYMANN agreed as to the advisability of adopting this suggestion.

HOLZ showed a patient with *Pseudo-Leukæmia*. Several years previously he had seen a case in which there was peculiar swelling of the entire pharynx, the uvula and faucial pillars being distended like a balloon. The symptoms promptly disappeared under arsenic. The case shown has had a more chronic course. Some months ago, swelling of the pharynx, with difficulty in breathing, set in; uvula and pillars of the fauces present a granular aspect; naso-pharynx free; deafness; swelling of cervical and retropharyngeal glands.

KATZENSTEIN. *The Orthoscope, a New Laryngeal Mirror which gives Upright Images*. In order to obtain upright images Katzenstein uses two mirrors which are united in a prism. The instrument is made by Zeiss of Jena. The two polished surfaces are warmed and the instrument is used like a laryngeal mirror. Sufficient space remains for the introduction of instruments.

FRÄNKEL mentioned that Hirschberg had already attempted to obtain an upright image by a second mirror.

KATZENSTEIN said that in his orthoscope the novelty lay in the mirrors being united in one instrument.

KIRSTEIN demonstrated a *Frozen Section of a Child in the Position for Autoscopy*.

Meeting, 8th May, 1896.

SCHÖTZ showed a case of *Congenital Closure of the Left Choana*. The faucial and pharyngeal tonsils were enlarged, and the septum was deviated to the left. Schötz did not venture to decide whether the latter condition was etiologically connected with the choanal closure. As a rule the closure is on both sides; when unilateral, it is more frequent on the right side. Schötz does not recommend the galvano-cautery for operating on these cases, on account of the number of sittings necessary, the liability to close again, and the proximity of the Eustachian tube, which predisposes to otitis media. Schötz makes an opening close to the septum, and widens it by means of an instrument like a lithotrite.

E. MEYER. *Bacteriological Examination of Rhinitis Fibrinosa*. After pointing out the clinical difference between nasal diphtheria and rhinitis fibrinosa, the etiology was discussed. The connection between the two diseases is not yet clear. Meyer has made a bacteriological examination of twenty-two cases of rhinitis fibrinosa. Loeffler's bacillus was cultivated thirteen times in its full virulence; in nine cases it was not found. Although there is the possibility that in these cases, also, the diphtheria bacillus was present at an earlier stage, it appears to Meyer more correct to assume that rhinitis fibrinosa is due to diphtheritic infection; it may, however, be also caused by other micro-organisms.

GRABOWER. *Clinical Contribution to Study of the Innervation of the Larynx*. By the report of an interesting case of recurrent paralysis in tabes, which Grabower observed for a considerable time with H. Oppenheim, he proves also from the clinical standpoint the correctness of the fact discovered by him experimentally, viz., that the accessorius has nothing to do with the innervation of the larynx, and that the vagus is the sole motor laryngeal nerve. The case was under observation for more than ten years, was examined repeatedly with the laryngoscope, and a necropsy performed. The organs involved were investigated microscopically, partly by Oppenheim and partly by Grabower. By the demonstration of the microscopic preparations from the extra-bulbar accessory and vagus roots, Grabower proved that the vagus is the only motor nerve of the larynx, as the accessory roots appeared normal, while the vagus roots were much atrophied.

A. B. Kelly (Trans.).

ABSTRACTS.

DIPHTHERIA, &C.

Bark, John.—*Two Cases of Diphtheria in which Curetting of the Trachea was Employed after Tracheotomy.* "Lancet," July 25, 1896.

IN the first case tracheotomy was "followed by relief, but after twenty-four hours the breathing became much embarrassed, and was not relieved by the use of feathers soaked in bicarbonate of soda solution. The tracheal incision was, therefore, extended down as low as possible, and the trachea and bronchi scraped with a small Volkmann's spoon with a long handle, and a small fenestrated curette with a long flexible handle. No anæsthetic was used. A firm, tenacious plug of membrane, about the size of the little finger, was brought up with instant relief. The curetting had to be repeated twelve times during the two subsequent days, and afterwards recovery was rapid. In the second case eighteen hours had elapsed after the performance of tracheotomy when cyanosis, inspiratory recession, and great exhaustion became marked. The tube being removed, exactly the same treatment was employed as in the first case, and with a similar happy result, two firm flakes of membrane being removed. The curetting was employed six times in all. In both cases the diphtheria antitoxin was employed. *St Clair Thomson.*

Dubost.—*Septic and Pyæmic Complications of Non-Diphtheritic Anginas.* "Thèse de Paris," 1896.

THE author reviews the principal accidents that sometimes occur after anginas, and affirms that, in numerous cases, the pathogenic evolution is obscure. The increase of virulence of streptococci, frequently present in the normal buccal cavity, is probably the origin of septic complications; but it is necessary, although not possible to afford an absolute proof, to ascribe an important part to the toxins elaborated by the bacillus. Two unpublished cases are given. *A. Cartaz.*

Gossage, A. M.—*The Influence of Glycerine in Culture Media on the Diphtheria Bacillus.* "Lancet," Aug. 15, 1896.

RECOMMENDS the addition of about nine per cent. of glycerine to the culture media for the diphtheria bacillus, and prefers glycerine serum to glycerine agar, as the growth is usually greater and the appearance of the bacilli grown more characteristic. *St Clair Thomson.*

Kanthack, A. A—*Metachromatism in Diphtheria Bacilli.* "Lancet," Aug. 22, 1896.

DOES not allow that there is a single morphological or biological character, a single chemical staining reaction of absolute or specific value, which will enable us to say with certainty that a bacillus resembling the Klebs-Loeffler bacillus is or is not the true bacillus—that is, assuming that we are not biased by the clinical knowledge of the cases. Such being his belief, he ventures to protect the tyro from a misconception, warning him against a test which depends on a phenomenon which may be produced with almost any organism in the presence of simple chemical substances. However characteristic metachromatism is—and,

indeed, it is striking—it is not characteristic of the true diphtheria bacillus as compared with the false one; hence as a diagnostic test it is valueless.

St Clair Thomson.

Kassowitz (Wien).—*Has Antitoxin an Immunizing Power in Man? A Critical Study with regard to the Laugerhaus Case.* “Wiener Med. Woch.,” 1896, No. 21.

THE 1895 diphtheria epidemic was unusually benign, for which reason the serum treatment seemed to show good results. Soerensen in Copenhagen had out of thirteen tracheotomies only one death, and all these cases were treated without antitoxin. Antitoxin has now established a great reputation for itself, and, although the sudden death of Laugerhaus' child in consequence of a prophylactic injection at first caused great excitement, the case is not, however, unique, another case being on record. Where the disease itself cannot prevent a second attack, it would be curious if an artificial substance would do it. Also the disease treated with serum does not prevent a second attack, as is observed in some cases. Of eight hundred and sixty-six cases with prophylactic injection sixty-five were affected with diphtheria. Widerhofer has only recently had a separate pavilion for diphtheria. In former times the diphtheritic children were in the same rooms with other patients, but yet there never arose an endemic of diphtheria in the hospital. In Halle, of one hundred and twenty-five immunized children in the clinic, three caught diphtheria; whilst of fifty others in the like circumstances and not immunized only one was affected. Immunized people take diphtheria from one day to sixteen weeks after the injection, so that it cannot be said that only those are affected which were infected previous to injection. The author concludes that the immunization is useless, because, as Behring says, “the possibility of cure depends on the possibility of immunization.” It must also be concluded that the serum treatment is without any effect.

Michael.

On the Relative Strengths of Diphtheria Antitoxic Serums. Report of a Special Commission. “Lancet,” July 18, 1896.

THE results obtained from the use of antitoxin have been less striking in England than those obtained on the Continent. In order to try and explain the difference of the results obtained, the “Lancet” instituted the inquiry, of which we here have the results. The following table gives the quantities of the serums on the market in July, 1896, that must be injected in order to introduce a dose of 3000 units—that now recommended by Behring for severe cases. In this connection it is mentioned that there is nothing sacred in these numbers, and that where considered necessary much larger doses—20,000 units—may be, and have been, used with the best possible results, since excess of antitoxin can apparently do no harm, and may often exert a most beneficial influence.

Source of Serum.	Estimated number of units in bottle.	Quantity required for dose of 3000 units.
British Institute of Preventive Medicine ...	700	..... 42 c.c.
Burroughs, Wellcome, & Co.	100	..... 300 „
Bacteriological Institute, Leicester.....	400	..... 150 „
Behring, Hoechst, Germany	600	..... 12 „
Schering, Berlin	875	..... 17 „
E. Merck, Darmstadt	150	..... 100 „
Pasteur Institute, France.....	300	..... 100 „
Institut Sérothérapeutique, Bruxelles.....	2000	..... 15 „
William Vogt, Geneva	350	..... 85 „

The conclusions are:—(1) That a common standard of estimating the strength of antitoxic serum should be agreed upon by English manufacturers. (2) That no

serum should be sent out containing less than sixty normal units per cubic centimetre. (3) That antitoxic serum of higher strengths must also be provided to meet the requirements of treatment in more severe cases of diphtheria. (4) That every sample of antitoxic serum sold should be plainly marked with the antitoxic strength of the serum (number of normal units of antitoxic serum per cubic centimetre), the quantity of serum present in the bottle, and the date of issue. *St Clair Thomson.*

Soerensen (Copenhagen).—*Serum Treatment of Diphtheria in the Begdam Hospital in Copenhagen.* "Therap. Monats.," 1896, No. 8.

THE author gives his statistics, and says:—The mortality of the cases treated with and without serum is nearly the same. The differences in the course of the disease were even less. Neither the mortality nor the development of the disease is influenced in any visible manner by serum treatment, but the curative influence of the serum cannot be excluded with certainty. Some cases were very favourably influenced, and secondary affection of the deeper air passages is certainly more rarely observed in cases treated with serum. But if there is already laryngeal diphtheria, and especially commencing stenosis, the injection cannot prevent the further progress of these symptoms. *Michael.*

MOUTH, &c.

Chassy.—*Variolous Angina: its Value in Diagnosis and Prognosis of Variola.* "Thèse de Paris," 1896.

FROM the examination of eight hundred and nineteen cases of variola, Chassy concludes that angina appears always at the same time as the cutaneous eruptions—viz., at the end of the third day. It is frequently very marked before the cutaneous manifestations; it has the same evolution—macules, papules, vesicles, to pustules. The eruption in the throat is sometimes accompanied by peritonsillar and sub-maxillary œdema; and angina, by the coincidence with the eruption of the skin, gives an easier diagnosis. *A. Cartaz.*

Gaultier, E.—*Pneumococcal Affections of the Pharynx.* "Thèse de Paris," 1896.

UNDER this title the author describes the various forms of angina caused by the presence of pneumococcus. He divides these varieties into five—suppurative, erythematous, follicular, pseudo-membranous, herpetic. The symptoms of these forms, frequently connected and clinically difficult to separate, are similar to those of pneumonia—intense fever, with high temperature, violent shivering, etc. The local symptoms do not differ very much from those of ordinary angina not due to the pneumococcus. *A. Cartaz.*

Helbnig (München).—*On Muscular Macroglossia.* "Jahrbuch für Kinderheilk.," Band 41, Heft 3 and 4.

IN a five-months-old child the author observed a tongue enlarged in all diameters. A portion of the tongue is always outside the mouth. The food is taken easily. Seen some months later, the organ is more enlarged, and cannot be drawn into the mouth. It was treated with Paquelin's cautery, and within a few weeks the tongue could be retracted. Death occurred from croup some months later. The examination of the tongue gave the same results as that of hypertrophy of other muscular organs. *Michael.*

Thoyer-Rozat.—*Retro-Pharyngeal Abscess in Children.* "Thèse de Paris," 1896.

IN this thesis Thoyer studies specially the idiopathic abscess, leaving apart the symptomatic. These suppurations are more frequent than is supposed; the insidious origin, the serious complications, make these abscesses a dangerous lesion. He relates numerous cases of sudden death. This accident is due to spasm, caused by compression of nerves, or by reflex action.

After describing the symptoms he discusses the treatment, and advises incision through the mouth, the external opening being reserved for abscesses deep or laterally situated, or in case of spasm of jaws preventing opening of the mouth.

A. Cartaz.

NOSE AND NASO-PHARYNX, &c.

Bayer (Brüssel).—*Ozæna: its Etiology and Treatment by Electrolysis.* "Münchener Med. Woch.," 1896, Nos. 32 and 33.

THE author concludes:—Ozæna is a tropho-neurosis, consisting in—(1) An anomaly of secretions of the nose, naso-pharynx, and pharynx. This secretion favours development of the specific microbe which produces the characteristic fætor. (2) Disturbances of nutrition and atrophy of the mucous membrane. (3) A rhinitis consequent upon the secretions. The best treatment of ozæna is electrolysis; but this treatment is not without danger.

Michael.

Black, A. M. (Denver).—*Nasal Sarcoma cured by Operation.* "New York Med. Journ.," Aug. 15, 1896.

THE patient, a woman of thirty-eight, was brought to the author by a medical man on account of an unaccountable rise of temperature, 101 degrees Fahr., the fever being of ten days' duration, and combined with frontal headache, with right-sided nasal occlusion of the same duration, which had been complete for eight days. There was a history of slight right-sided nasal obstruction and nasal hæmorrhage, but the duration of the trouble was not known. A hardish lobulated mass occupied the right side of the nose, causing deviation of the septum and general enlargement and redness of the nose; the growth also projected into the naso-pharynx. Under ether most of the growth was removed with snare and curette, and what was left was removed subsequently under cocaine anæsthesia, and trichlor-acetic acid was used as a caustic. The case had been under observation for two years, with no sign of recurrence. The bulk of the tumour consisted of rather large round and oval cells, showing an alveolar arrangement in parts, and was considered an undoubted sarcoma.

R. Lake.

Chapard.—*Relation of Rachitic Deformities to Chronic Obstructions of Superior Respiratory Tract.* "Thèse de Paris," 1896.

IN this very interesting pamphlet, Chapard notes the great influence over the thoracic development of chronic obstructions of respiratory tract (hypertrophied tonsils, adenoid vegetations, nasal obstruction, etc.). By diminishing the amplitude of breathing, the lung is atrophied, the thorax is less opened, and little by little is deformed, and these deformations become more and more marked, especially if the child is rachitic. These deformations are not characteristic of the nature of obstructions. He studies each variety, and advises early treatment of the etiologic factor and after-treatment of spine deformations—lordosis or scoliosis.

A. Cartaz.

Escat.—*Congenital Stenosis of the Nasal Fossæ and of the Naso-Pharynx.*

"Arch. Internat. de Lar.," May and June, 1896.

ALTHOUGH adenoid vegetations are frequently present in children affected with congenital deformity of the facial skeleton, the result possibly of the necessary habit of mouth-breathing, these hypertrophies are nevertheless found to be absent in a certain number of individuals presenting an appearance resembling that of the adenoid facies. It is of this class that the author gives a clinical sketch, illustrated by three cases. Ruault has reported an instance occurring in a girl of thirteen, in whom the transverse diameter of the face was atrophied, the nasal fossæ narrow, and the palate arched, but in whom the pharyngeal tonsil was unusually small. The mental development was in a state of arrest in this case, and a review of writings concerned with congenital mental degeneracy shows that a similar facial deformity has been frequently noted in such cases.

The first illustrative case is that of a youth of twenty-two, an imbecile and epileptic, with well-marked microcephalus, lateral flattening of the facial skeleton, and a facial angle of sixty degrees. The nose, prominent in profile and arched, was extremely narrow. The alæ were but slightly indicated, and the levator muscles appeared to be atrophied. The mouth was kept widely open, both upper and lower sets of teeth were irregular, and the chin of the "runaway" order. The palate was markedly arched and narrow, and the lack of lateral development was very noticeable in the thorax. The naso-pharynx, of the full height, was much diminished in sagittal and lateral diameter, but no hypertrophy of the soft structures was present.

In the second case—that of a boy of eleven—a similar facial construction was evident, and mental torpor was marked. The choanæ, though very narrow, were quite free from obstruction by the pharyngeal tonsil, which was of normal size. At the instance of the parents the latter was removed, but without any modification of the oral respiration necessitated by the narrowness of the nasal fossæ.

In the third case—that of a man of fifty-six, who suffered from childhood with great difficulty of nasal respiration—a similar conformation was remarkable. The pharynx in particular was extremely narrow, and the bucco-pharyngeal isthmus had the appearance of that of a child of five or six. No trace of hyperplasia or of cicatrization of the soft tissues was present.

Speaking generally, the appearance of cases of congenital stenosis is analogous to that due to acquired stenosis, the result of adenoid vegetations; but, in addition to the facial and thoracic deformity, mal-developments of the cranium (particularly micro- and dolicho-cephaly), and also of the auricles, and of the limbs, are frequently met with. In a few instances naso-pharyngeal stenosis has also been associated with macro- and brachy-cephaly.

As in the first case described, the nasal fossæ may be reduced to a mere slit without any abnormality of the septum. The pillars of the fauces are situated unduly near the middle line. The posterior pillars are very short, being attached unusually high up, while the inferior border of the velum, when fully relaxed, closely approaches the back wall of the pharynx. The latter circumstance renders posterior rhinoscopy difficult, and digital examination is necessary in order to establish the absence of adenoid hypertrophy.

The symptoms noticeable in this class of case are respiratory, auditory, vocal, and intellectual. Although middle ear derangement is observed, the deafness frequently present is in a measure attributable to psychic debility. The voice lacks timbre and sonority, and is to be distinguished from that characteristic of adenoid vegetations, in which the nasal vowels "an," "en," "on" are suppressed.

The intellectual symptoms are due to a primary congenital psychic debility,

and, unlike the aprosexia of adenoid subjects, are in no way modified by the efforts of the rhinologist.

Finally, heredity is an important factor in the pathology of the disease, and not only is there frequently a family history of mental unsoundness, but even of similar facial deformity in the forebears.

Ernest Waggett.

Gardner, Bellamy.—*A Note on the Administration of Nitrous Oxide Gas, with Oxygen, for the Removal of Adenoid Growths.* "The Clin. Journ.," Sept. 2, 1896.

THE advantages claimed for this anæsthetic are : (1) It is not attended with danger to life ; (2) no preparation for an operation is required ; (3) hæmorrhage is not affected by it ; (4) jactitation and cyanosis produced by pure nitrous oxide are absent ; (5) any position desired by the operator may be safely assumed ; (6) the available anæsthesia is ten or fifteen seconds longer than that yielded by gas alone ; (7) unpleasant after effects are of very rare occurrence.

Middlemass Hunt.

Gillette, A. J.—*Torticollis due to Adenoid Vegetations and Chronic Hypertrophy of the Tonsils.* "New York Med. Journ.," Aug. 1, 1896.

THE author quotes three cases of torticollis in which the sole probable cause was either adenoids or enlarged tonsils. Two cases, aged respectively seven years and sixteen months, were both subject to adenoids, and the former also to enlarged tonsils. Tonsils were removed with a slight improvement in the latter case, the former being cured by the usual operation, and the other will require operation. In the third case the torticollis was of about six weeks' duration and had not yielded to ordinary remedies. The author was unable to discover any cause except a large quantity of adenoid vegetations, and the only history was one of a cold some six weeks before, just previous to the commencement of the torticollis. The adenoid vegetations were removed, and in two or three days the deformity had entirely disappeared.

R. Lake.

Keen, W. W.—*Three Cases of Plastic Nasal Surgery.* "Therapeutic Gazette," July 15, 1896.

1. CASE of saddle-shaped nose, the result of fracture eighteen years previously. A transverse incision was made just above the alæ, and the superficial tissues loosened as far as the border of the frontal bone on each side. An artificial bridge consisting of two plates of silver soldered together and gold-plated was then inserted, and the opening closed by Halsted's subcuticular suture. The result has been excellent, and the gold plate has never caused the slightest inconvenience.

2. Case in which entire nose was removed for sarcoma. An artificial nose of silver, with a flange below which hooked behind the bone and held it in place, was constructed to hide the large hole left after the healing of the parts. The new nose was painted to resemble flesh colour as near as possible.

3. Case in which a markedly arched Roman nose was converted into a straight Grecian nose, by chiselling away the prominence of the bones after dissecting up the soft parts. A very good result was obtained, the scar being scarcely visible.

Middlemass Hunt.

Mackenzie, Hunter.—*A Case of Diffuse Papillomatous Degeneration of the Nasal Mucous Membrane.* "Lancet," Aug. 15, 1896.

OCCURRED in a man, aged thirty. There was no history of syphilis, but he was somewhat alcoholic. The mucous membrane of both nostrils was studded throughout by numerous sessile growths, varying in size from a pin's head to almost a grain of rice. They were most abundant on and about the upper regions.

Several of the larger growths were removed with the cold snare, but the greater number could be detached only with the nasal curette. Four months afterwards there was no recurrence. Microscopical examination showed the undoubted papillomatous character of the growth. *StClair Thomson.*

Massei.—*A Case of Caseous Rhinitis.* "Arch. Ital. di Laring.," April, 1896.

A CASE of caseous rhinitis, lately observed and cured, formed the basis of a clinical lecture, in which the author discussed (1) the symptoms and (2) the different opinions. Coryza caseous may be dependent upon different causes—as in growths, etc. He believes the name of "caseous" more suitable than that of "cholesteatomatous"; and having confided the bacteriological researches to one of his assistants, Dr. Guarnania, he announces that the micro-organism which Sabrazès considered as a filamentous bacterium is, on the contrary, the streptothrix alba, already isolated, cultivated, and examined by Prof. de Giaxa, of Naples, while studies and experiments are still in course. He believes that three elements are necessary for the production of the caseous rhinitis—(1) an abundant purulent secretion in the nose; (2) an obstacle to its free issue; (3) the presence of the streptothrix alba, which finds a favourable *terrain* for its germination. Further relations by Dr. Guarnania are promised. *Massei.*

Moizard.—*Treatment of Whooping Cough by Nasal Insufflations.* "Journ. de Med. et Chir. Pratiques," Aug. 10, 1896.

SINCE Michael suggested this method of treatment, Moizard has employed, with great benefit, nasal insufflations of antiseptic powders. He uses this powder:—

Benzoin (pulv.)	10 parts.
Salicylate of bismuth	10 "
Quinine (sulphate)	2 "

The insufflations are made five times a day. In a week, and less, the fits of coughing are reduced in number and intensity and the cure is rapid. *A. Cartaz.*

Piaget.—*The Self-Defence of Nasal Cavities against the Bacterial Invasion.* "Thèse de Paris," 1896.

AFTER an elaborate review of StClair Thomson's, Wurtz's, and Lermoyez's papers, the author relates the numerous experiments which he has conducted for the study of bacteria of the nose. In the normal state the nasal cavities are free from microbes, except the anterior part and vestibule. The culture of nasal mucus collected in the remote parts is sterile; the nasal cavities are normally aseptic. That asepsis is the result of the structure of the canal, of the ciliated epithelium, and specially of the bactericidal properties of the nasal mucus. That bactericidal action is absolute for carbuncle bacteria, very marked for Loeffler's bacillus, and less marked for staphylococcus and streptococcus. This asepsis explains to a certain degree the immunity of nasal operations. *A. Cartaz.*

Waterhouse, H. F.—*Adenoid Vegetations in the Naso-Pharynx, and their Treatment.* "Clin. Journ.," Aug. 26, 1896.

ADENOIDS are more common in boys than girls—in the proportion of two to one—and are as frequently met with in healthy and vigorous as in strumous children. Heredity plays an important part in their causation. For purposes of diagnosis posterior rhinoscopy can only be used in less than half of all cases, and in children under six is practically useless. Digital examination is to be preferred. If growths have given no trouble before puberty there is little probability of their causing symptoms later in life.

In adults one may use galvano-cautery with cocaine anæsthesia, and two or

three sittings will be sufficient to remove growths safely and efficiently. In children always use a general anæsthetic to save shock, and complete operation at one sitting. If tonsils also enlarged, remove them without an anæsthetic a few days before, especially in young and weakly children. In older and stronger children, may first remove tonsils and then adenoids under one administration of anæsthetic. The safest position and the most convenient for operation is with the hanging head. Dalby's position is also safe if using gas. Any other position is unsafe.

Of anæsthetics, chloroform is the most handy and the most easily administered, but even in careful hands so many deaths have occurred in this operation that the author, though he has used it hundreds of times "with fear and trembling," has now taken to nitrous oxide. Given with oxygen it is the best anæsthetic for most cases of adenoids.

With regard to instruments, Gottstein's curette is the most generally useful, but when growths are firm forceps must be used. Of these, Löwenberg's remains the best. In weakly children use forceps for whole operation, as hæmorrhage is less than when curette is used.

Middlemass Hunt.

LARYNX.

Kirstein, A.—*Autoscopy of the Upper Air Passages.* "Therap. Monats.," July, 1896.

To see directly into the larynx and trachea the observer, wearing a frontal mirror, or, still better, a frontal lamp, and sitting opposite the patient, places the patient in such a position as to bring the axis (theoretical) of the mouth (with the tongue removed) and that of the trachea as nearly as possible into a straight line. The tongue and epiglottis alone obstruct his view of the larynx. He must therefore make a depression in the tongue reaching as far backwards and downwards, and as exactly in the axis of the trachea, as possible. In doing so he will at the same time pull the epiglottis out of the way. This can be done with a long, narrow tongue depressor, slightly bent downwards at its distal extremity. Care must be taken not to produce retching. By this means he will be able to see: (1) in very numerous cases, the posterior wall of the larynx; (2) often, the posterior two-thirds of the vocal cords; (3) seldom, the whole larynx, including the anterior commissure of the cords. The amount of the trachea visible will vary correspondingly. The part most easily seen, viz., the posterior wall of the larynx, is the most difficult to observe accurately with the laryngoscope. Little children are most difficult to examine with the laryngoscope, most easy by the direct method.

This method is of great service in finding and removing foreign bodies in the air passages. It is also often of great value in laryngeal operations (specially polypi), permitting the complete removal of even large tumours in one sitting (Bruns).

The larynx and trachea can be very easily and thoroughly examined in all children deeply under chloroform. If the anterior commissure is not visible, it can easily be brought into view by gently pressing the thyroid cartilage backwards.

The importance of this simple procedure in children suspected to have papilloma of the larynx is at once apparent. Should papilloma be found, it would be wise to at once tracheotomize, and either then or later proceed to operate.

In little children good results are often obtained even without narcosis.

Arthur J. Hutchison.

Krebs (Hildesheim).—*Treatment of Chronic Pharyngo-Laryngeal Catarrh.*

"Therap. Monatss.," 1896, Nos. 6 and 7.

THE author believes that the dried secretion in cases of pharyngitis and laryngitis sicca is not produced *in loco*, but that it comes of the nose. Therefore the nose must be treated in such cases. Many chronic catarrhs are only neuroses, and must be treated by psychic therapy. The author concludes with a review of the different methods of local therapy.

Michael.

Neurath (Wien).—*Laryngeal Syphilis in Children.* "Jahrbuch für Kinderheilk.," Band 41, Heft 3 and 4.

A CHILD, six years old, diseased by hoarseness, dyspnoea, and difficulties of swallowing for a year. The examination showed a perforating ulcer in the hard palate, necrotic sequestræ in the nose, ulceration of the epiglottis and the vocal bands. Inunctions. Improvement. Relapse of the symptoms; sudden death by asphyxia. The *post-mortem* examination confirms the diagnosis.

Savery, Frank, and Semon, Felix.—*Bilateral Paralysis of the Recurrent Laryngeal Nerves due to Malignant Stricture of the Œsophagus.* "Lancet," Sept. 19, 1896.

THE interest of this case centres in the occurrence of complete bilateral paralysis of the recurrent laryngeal nerves. Whilst more or less incomplete paralysis of both these nerves is not of infrequent occurrence, really complete bilateral paralysis is but exceedingly rarely met with, owing to the fact that the lesion which causes the laryngeal paralysis almost always ends fatally before the stage of complete paralysis is reached. The symptoms resulting from this condition have always been described as complete aphonia with dyspnoea—the latter on exertion only. The present case teaches that another important symptom may be the result of the bilateral paralysis—viz., impossibility of taking nourishment in the ordinary erect position. The explanation is that when both recurrents are paralyzed closure of the glottis is impossible, and food and drinks are, therefore, apt to penetrate into the larynx. The mucous membrane of the larynx being supplied by the internal branch of the superior laryngeal nerve, the sensibility of the larynx is not affected by the lesion under consideration, and hence the entrance of any foreign body into the larynx will be immediately followed by reflex cough, as in this case. The position recommended by Wolfenden for cases of painful dysphagia was found to be successful—viz., horizontal position on the side, with the head well over the edge of the bed, and fluid nourishment to be taken through a feeding-cup inserted into the lower angle of the mouth. When drinking in this position the fluid passes, not over, but by the side of the larynx through the hyoid fossa, and penetrates into the Œsophagus without coming in contact with the posterior surface of the larynx. Semon warmly recommends the adoption of this method in cases of tuberculous and malignant disease of the larynx, and malignant disease of the Œsophagus. He suggests its use in post-diphtheritic anæsthesia of the larynx in which the entrance of nourishment into the air passages must be feared.

St Clair Thomson.

Stoker, G.—*Impaired Movements of the Vocal Cords.* "The Clin. Journ.," June 10, 1896.

FOR clinical purposes, the causes of impaired movement of the cords may be divided into neuropathic, myopathic, obstructive, and functional. Under the head of "obstructive" come all cases of thickening of the laryngeal mucous membrane, new growths, inspissated mucus, and foreign bodies.

Mr. Stoker is of opinion that an ordinary catarrh does not usually affect the

laryngeal muscles; that in chronic syphilitic laryngitis there is always thickening of the inter-arytenoid mucous membrane; and that a triangular opening between the vocal cords is an essential characteristic of functional aphonia. In laryngeal phthisis, he finds it is no use to apply irritating treatment, such as scraping and rubbing in lactic acid, as the only result is to create a tuberculous ulcer which one never succeeds in healing.

Middlemass Hunt.

E A R.

Adams, J. L.—*Thrombosis of the Lateral Sinus, with Recovery after Operation.* "New York Med. Journ.," Aug. 29, 1896.

THE author narrates a successful case of removal of a septic thrombus from the lateral sinus in which the jugular was not exposed in the neck, and in which the lower end of the thrombus does not appear to have been removed. He then appends a very clear and concise summary of the history of the operation, and the views held by those who have considerable experience in this operation.

R. Lake.

Bacon, G.—*A Case of Brain Abscess secondary to Chronic Suppurative Otitis Media and presenting Unusual Symptoms. Operation. Recovery.* "New York Med. Journ.," Aug. 15, 1896.

THE patient, thirty-two years of age, who suffered with otitis media suppurativa on the left side, was seized with intense headache on December 5th, 1895, aural pain, and fever (104° F.); in the afternoon he had general convulsions and foamed at the mouth. The evening temperature was 100° F.; pulse, 104; respiration, 26. The eburnated mastoid was opened; the lateral sinus, being wounded and containing fluid blood, required plugging. For some days he was better; but aphasia and a rigor were observed on the 9th. The former becoming marked and the temperature continuing high, a second operation was undertaken the next day. A piece of bone was removed three-quarters of an inch in diameter, and two inches above the meatus, and pus was found between the brain and tegmen tympani, and a large abscess cavity was found in a direction in-up and backward, the amount of pus being in all about an ounce and a half. There was reaccumulation of pus on the 14th; and on June 1st all aphasia is gone, and the facial palsy which had existed since the first operation is disappearing.

R. Lake.

Bernstein, Edward J.—*Primary Tuberculosis in Relation to the Middle Ear.* "Charlotte Med. Journ.," June, 1896.

THE middle ear may become infected at any period in tuberculosis, and in a considerable number of cases it is the primary seat of the disease. If any suspicion, seek for bacillus; but remember a negative result does not exclude, nor the actual presence of the bacilli is not, *per se*, conclusive of tubercular origin. The membrana tympani may be first affected, small greyish-yellow elevations forming, which on breaking down leave numerous perforations—the "sieve-like" drum. The meatus is large and wide, owing to the absorption of subcutaneous fat, and the skin lining it is pale, hard, and dry. The left ear is attacked by preference, but, though usually unilateral, it is often bilateral. In conclusion, Dr. Bernstein relates two cases of primary (?) tuberculosis of the middle ear occurring in his own practice.

Middlemass Hunt.

Clayton.—*A Case of Peripetrous Suppuration.* "Birmingham Med. Review," Aug., 1896.

A GIRL, aged twelve years, who had suffered from a purulent discharge from the left ear from infancy. After severe headache, lasting five weeks, accompanied by rigors, she had right hemiplegia.

The left mastoid antrum was opened with a trephine, but nothing abnormal found. The left Rolandic area was then exposed, and an exploring needle inserted through the bulging dura mater. Several drachms of cerebro-spinal fluid were withdrawn, and the pulse and respiration improved. Drainage tubes were inserted, and for three days the patient did fairly well. Then the mastoid trephine wound looked unhealthy, and less than one drachm of pus was found beneath the dura mater at the bottom of the trephine hole. Also she was trephined over the temporo-sphenoidal region, and a needle passed in order to explore the parts in relation with the temporal bone, but no pus was reached.

Two days later proptosis of both eyes was noticed—this increasing on the left side—the conjunctiva became chemiatic, and the globe became very prominent. Cerebro-spinal fluid escaped from the upper trephine hole and pus from the mastoid.

About a week after this fluctuation was noticed over the upper eyelid and external angular process, and a quantity of thick, fetid pus escaped on incision. The patient died a few hours later.

Post-mortem.—Dura mater at the bend of the left lateral sinus and at apex of middle fossa on left side abnormal, the point of left temporal lobe being adherent. No pus within the dura mater, but a small abscess in the extreme apex of the left lower temporal convolution. The convolutions over it were greenish in colour, and their vessels markedly injected. Left mastoid antrum contained yellow inflammatory material, which had entered and completely plugged the left lateral sinus, and had burrowed some distance along the posterior surface of the petrous bone, between the latter and the dura mater. On the front surface of the bone there was a similar condition, and the pus had entered the orbit through the sphenoidal fissure; and lay within and among the structures embedded in the capsule of Tenon, and had made its way out into the subcutaneous tissue of the left temporal region.

B. J. Baron.

Gellé.—*The Aura of Auricular Vertigo.* "Ann. des Mal. de l'Oreille," March, 1896.

THE author discusses the sensorial and motor premonitory phenomena of the attack of auricular vertigo, showing that irritations of the auditory nerve produce in man not only divers perturbations of equilibrium and movements, but that they also act upon the psychological centres, provoking veritable hallucinations of sight and movement which only clinical observation can discover.

R. Norris Wolfenden.

Martin, W.—*Some Remarks on Chronic Aural Catarrh.* "Charlotte Med. Journ.," May, 1896.

ADVOCATES the use of pilocarpin injections in all cases of advancing aural catarrh where ordinary treatment has been of no avail. In selected cases this method of treatment produced improvement in seventy per cent. In cases not selected benefit followed in twenty per cent. In the atrophic form it is of no use, and then the only resort is operation for removal of the tympani and ossicles, which is now recognized as beneficial in a large class of cases.

Middlemass Hunt.

Richardson, C. W. (Washington).—*A Case of Hæmorrhage from External Auditory Canal.* "Ann. Ophth. and Otol.," July, 1896.

THE author refers to five published cases, and proceeds to narrate his case, which was briefly: A negress, thirty years of age, who had recently been under treatment for tertiary syphilis, complained of frequent hæmorrhages from the ear (left); these gradually became more frequent, until in and since March, 1895, it has been practically continuous. The only obvious objective symptom was the blood in the meatus, no bleeding point being observed; the subjective symptoms being pain, especially over the mastoid and parietal regions, and on introducing the speculum, severe tinnitus, vertigo, and increasing deafness. Treatment has been most unsatisfactory, and the source of the bleeding is supposed by the author to be the cerumenous glands.

R. Lake.

Thornton, Bertram.—*The Telephone and its Application to the Deaf.* "Lancet," Aug. 15, 1896.

A DESCRIPTION with two illustrations of a modification of the telephone, which promises to be of material use in the education of those deaf mutes who possess a fragment of hearing power; and it has the following advantages over the single speaking-tube that is sometimes used:—(1) That the wires from several receivers can be coupled up to one transmitter, and thus a teacher can instruct a group of children at the same time; and (2) that, as it is not necessary for the teacher to apply his mouth close to the transmitter, the pupils have a full view of his facial expression and lip movements, which is not the case when he has to direct his attention and his voice into the mouth of a speaking-tube or trumpet.

St Clair Thomson.

Wall, G. A. (Topeka, Kan.).—*Mastoid Abscess, complicated with Lateral Sinus Thrombosis and Diabetes—Recovery.* "Annals Ophth. and Otol.," July, 1896.

THE patient was a woman, sixty-two years old, who was attacked with otitis media, with perforation on the right side and hæmorrhagic otitis on the left; the membrane on this side was incised, and quite a large quantity of blood escaped. Both ears now became the seat of suppurative otitis. The urine was examined and found to contain seven per cent. of sugar, for which she was treated with codeine. The left ear was now—one month after the first attack—the only one discharging. She now suddenly had a rigor, followed, two days later, by another; tenderness over the mastoid was well marked, with induration along the anterior border of the sterno-mastoid. Ten days later the antrum was opened, giving exit to much thick pus. The lateral sinus was also exposed and found thrombosed; the thrombus was removed with a curette. The internal jugular was not tied in the neck for the following reasons: the grave history of these cases; the age of the patient; the large amount of sugar; and her great debility. The result quite justified the course pursued, as the patient not only made an uninterrupted recovery, but, under dietetic treatment, her excretion of sugar was reduced to one-half per cent. The article also contains a brief review of the subject, and the author expresses his belief that all cases of hæmorrhagic otitis are renal in origin.

R. Lake.

COMPLIMENTARY DINNER TO SENOR MANUEL GARCIA,
by the GLASGOW SOCIETY OF MUSICIANS, Sept. 30th, 1896.

It is slightly deviating from our usual habits, perhaps, to give a brief abstract of a purely social meeting, but we are sure that there is no living man we all delight to honour more than this celebrated teacher. Amongst the best known medical men present were Profs. Gairdner, Charteris, Coats, and Henry E. Clark; Drs. J. Cowan, Woodburn, J. W. Allan, Macintyre, Walker, Downie, A. B. Kelly, etc. Mr. Julius Seligmann, from the chair, proposed the toast of the evening, pouring forth a glowing eulogy on the renowned singer. It is, however, chiefly with the welcome accorded by the profession, in whose name Dr. J. Macintyre spoke, that we are chiefly concerned. He naturally chiefly devoted his remarks to the laryngoscope, saying that although Garcia was not absolutely first in the field, his discoveries were the first practical ones; and though his original ideas and models had been to a certain extent modified, they practically remained the same, and his name would go down to posterity inseparably connected with the discovery of laryngoscopy.

REVIEW.

Handbuch der Laryngologie und Rhinologie. Band II., Theil I. (Wien: Hölder, 1896.)

THIS is the first part of the second volume of Heymann's manual of laryngology, and contains three articles dealing with the anatomy, the physiology, and the methods of examining the pharynx.

The first of these articles is by Prof. Disse, of Marburg, and treats in an exhaustive manner of the anatomy and development of the pharynx. This will probably be found to be the most interesting article of the three, and particularly that part devoted to the region of the naso-pharynx and pharyngeal tonsil.

The vexed question of the pharyngeal bursa is thoroughly gone into, and Dr. Disse takes up the position of Luschka and Killian, maintaining that the "bursa" is a distinct anatomical structure, quite independent of the pharyngeal tonsil. In most of the recent text-books the writers have followed Ganghofner and Schwabach, and identified the bursa pharyngea with the recessus medius of the pharyngeal tonsil. Dr. Disse objects to this view, and shows that Luschka's description of the bursa "as a sac one and a half centimètres long, whose closed end reaches to and even penetrates the periosteum of the basioccipital," proves that he could not have had in his eye the median recess of the tonsil, which only extends some millimètres into the submucosa. There is a difficulty, however, in explaining how Luschka should have found this "bursa" to be present,

"if not constantly, yet very often," when all other observers agree as to its rarity. Thus Schwabach met with Luschka's bursa only four times in twenty-nine subjects, and Dr. Disse himself only found it twice in about thirty examinations. In the embryo it is evidently much more frequently present, as Killian found it in fourteen out of forty-five specimens.

The important point for the clinician to note is, that the presence of Luschka's bursa cannot be made out by an examination during life. Only an anatomical dissection can determine if a blind sac, whose opening is situated in the median line of the pharynx, behind the pharyngeal tonsil, reaches to the periosteum of the basioccipital. The term, "bursa pharyngea," may therefore be dropped from all clinical descriptions of naso-pharyngeal disease.

The article on the physiology of the pharynx is by Prof. Einthoven, of Leiden. It is confined to a discussion of the muscular movements of the pharynx during speaking, breathing, swallowing, etc., and gives a brief but sufficient description of these acts. For the physiology of the mucous membrane and the glandular tissues, the reader is referred to other chapters of the work.

The article by Dr. Spiess, of Frankfort, on the methods of examining the pharynx, naturally resolves itself into a discussion of posterior rhinoscopy. In it the author does not confine himself to what his own experience has taught him, but describes and criticises the various methods and instruments which have been devised, from the time of Czermack downwards, to facilitate the examination of the naso-pharynx. We agree with Dr. Spiess, that frequently all the suggested helps become hindrances, though at times one or other of them may aid us in a troublesome case. Dr. Spiess thinks that cocaine never assists, but rather hinders, in a rhinoscopic examination. But we have frequently found that a dilute solution (two per cent.), sprayed through the anterior nares and over the palate, has quieted an irritable pharynx, and made an examination possible.

Regarding palpation of the naso-pharynx, Dr. Spiess insists that it should always *follow* posterior rhinoscopy; the hand supplementing, not supplanting, the eye. How often, by neglecting this rule, have post-nasal adenoids been diagnosed, and even operated on, when the rhinoscope would have shown that only a normal pharyngeal tonsil was present?

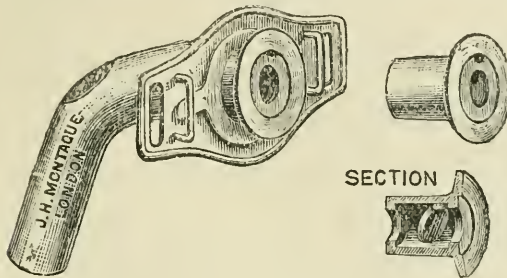
One method of examining the naso-pharynx the author omits entirely, or only mentions in connection with the use of Zaufal's speculum to condemn it: examination through the anterior nares. In the detecting of adenoid growths in young children it is especially useful. If a cocaine spray be thrown into the nasal passages, and a bright light employed, a view of these growths can always be obtained by anterior rhinoscopy. In this way we avoid making a digital examination till the child is under an anæsthetic at the time of operation.

Middlemass Hunt.

NEW INSTRUMENTS, PREPARATIONS, ETC.

A NEW FORM OF TRACHEAL VALVE. Philip de Santi. ("Lancet," July 25, 1896.)

This instrument is designed for those patients who have to wear a tracheotomy tube for several months, or even permanently. The objections to the usual form are, that when the patient attempts to talk he has to place his finger on the mouth of the tube, and on coughing the expectoration is voided in an uncleanly and unpleasant manner through the tube. There are several objections to the "pea valve," which was designed to overcome these objections. The movements of

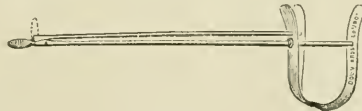


the "pea" are noisy, the ball readily gets clogged, and it often gets out of order. These objections have not been overcome by the adoption of an india-rubber valve arrangement. In the author's invention a silver valve working on a hinge permits the free entrance of air on inspiration; on expiration, vocalization, or coughing, the valve is driven forwards and comes up tightly against a small silver inner rim, thus preventing any exit of air, mucus, etc. The advantages of this are:—(1) Its simplicity; (2) the facility with which it can be kept clean and sterilized; (3) the working of the valve is unaccompanied with any rattling noises; (4) the valve is airtight, and cannot be coughed out; and (5) the supply of air is but little diminished, considerably less so than in Luer's or Smith's valves. Two illustrations make the above description easily understood.

St Clair Thomson.

QUER'S AURAL CURETTE. (Messrs. Down Bros., 21, St. Thomas' Street, Borough.)

A specimen of this elegant little instrument has been submitted to us for inspection, which looks as if it would prove of great service in those troublesome



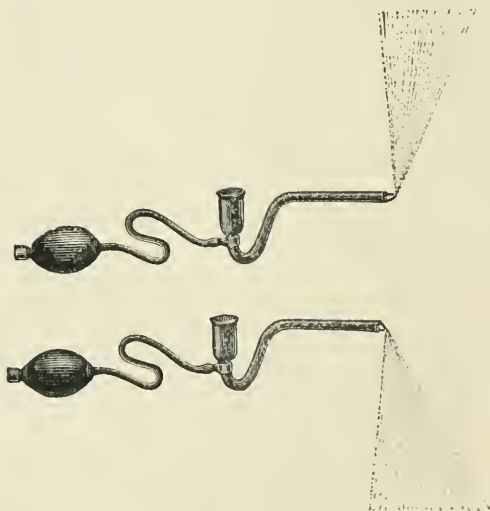
cases in which foreign bodies are found in the external auditory canal. When the foreign body is *near* the membrane, however, this instrument should not be used, as the lower or curette blade projects $\frac{5}{8}$ nds of an inch beyond the upper. The instrument in the cut is shown with the curette in the straight position for introduction and the erect for retraction.

NEW LARYNGEAL, NOSE, and PHARYNGEAL SPRAYS. (Chas. Midgley, Limited, 23, St. Anne's Square, Manchester. 3s. 6d. each net. Agent: Rogers, Oxford Street, London.)

These are most ingenious sprays, and are made in the three forms as shown in the woodcuts, and are the invention of Dr. A. Hodgkinson, of Manchester. They were originally made of glass, but this proved too brittle, and so they are



now made of vulcanite. The fluid to be used is dropped into the cup, and by this means an absolutely accurate and known amount of the solution (even as small a dose as two minims) is used. This is, of course, a great advantage when cocaine is used by the patient, or where, in kakosmia and allied conditions, other toxic remedies, as strychnia, are employed.



The small cost of these instruments will commend them especially to hospital surgeons, who often desire to order them for hospital patients.

THE
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THE ANTITOXIN TREATMENT OF DIPHTHERIA.

By LENNOX BROWNE, F.R.C.S.Edin.

Senior Surgeon to the Central London Throat, Nose, and Ear Hospital, etc.

"Old things need not be—therefore true,
O brother man, nor yet—the new." CLOUGH.

EIGHTEEN months ago (May, 1895) I published in this journal some comparative statistics of the effects of diphtheria antitoxin, as judged by one hundred cases treated under my observation. This was followed by a somewhat extended criticism in "Diphtheria and its Associates," issued a month later.

My treatment of the subject was generally recognized as an impartial epitome of the serum treatment of diphtheria up to that date. My present purpose is to pursue the matter still further, not this time by a record of personal experience, but by a review of that of others as exhibited in the mass of individual communications, and of hospital statistics, under the burden of which the whole medical world may, in the interval, be said to have positively groaned.

Of individual accounts the large majority are without value, as they have referred either to isolated cases or to series so small as to be useless for the purpose of comparison. Of more extended reports, it is simple fact to state that of those in favour of antitoxin not one can be considered as entirely satisfactory, since the conditions of comparisons of the new with the old treatment have in no single instance been made on an equal basis. By all former returns, analogous to those of our own Registrar-General, any fatal case of diphtheria admitted into hospital as such has been recorded as a death from that disease, no matter what the actual cause; but in recent hospital and State reports on the serum treatment, it has become a practice to exclude cases complicated with other diseases, e.g., scarlet fever and measles, and to ignore as deaths from "diphtheria"

those due to complications and sequelæ, notwithstanding that the deaths would not have occurred had it not been for the primary diphtherial infection. Again, reasons have been given for excluding those in which injections have been made at an advanced stage of the disease; and yet again, those which have not been injected at all, because their hopeless character "would spoil statistics." All these have by a natural sequence been placed to the discredit of the non-serum treatment.

Numerous authors have pointed out—Winters of New York especially—that the percentage mortality as applied to serum treatment, forms a most misleading basis for calculations, if only because every sore throat however mild from a clinical point of view—in which a single Klebs-Loeffler bacillus has been detected, has been included in the list as a case of diphtheria. Kassowitz and many others have shown that in but few cities has the gross mortality from this disease been actually decreased; and, moreover, as I have previously pointed out, even in cities where great reduction in the percentage mortality has been reported as a result of the serum treatment, the decrease has not been so great as to compare favourably with the best results obtained by the older remedies on large numbers of cases in other cities, more particularly in our own isolation hospitals under the Metropolitan Asylums Board.

Whatever the general gravity of an epidemic of diphtheria may be, the malady is admitted to be particularly serious when it attacks children under five years of age, so that a comparison of the gravity of the cases is not to be obtained by differences of numbers at this period in the serum and non-serum treated cases, as claimed in the Metropolitan Asylums Board report for 1895, but by the proportionate death rate in each class at those years of life in which "the fatality of diphtheria is so notorious:" that, in point of fact, no case under five years of age can ever be said to be mild. The following figures illustrate the position:—

1894.—Prior to antitoxin.....	1171 cases.....	Deaths, 556 = 47·4 p.c.
1895.—With ,, 	1013 ,, 	379 = 37·4 ,,
1895.—Without ,, 	440 ,, 	118 = 26·6 ,,

Thus the mortality of cases treated without serum under five years of age in the metropolitan fever hospitals in 1895 is more than twenty per cent. less than that of those treated under the same conditions in 1894; and more than ten per cent. less than that of the serum-treated cases in 1895.¹

After all, it must, however, be candidly acknowledged that the serum treatment has received the approval of many eminent authorities. On the other hand, the following long, but by no means exhaustive, list demonstrates how numerous and various are the centres of observation that have furnished writers of repute who express themselves as either definitely adverse to the treatment or who deprecate the extravagant enthusiasm of some of its advocates:—

¹ A letter appeared in the *Times*, April 6th, 1896, written by a surgeon of some eminence, judging from character of the type accorded to it, and signed F.R.C.S., in which the opinion was expressed that the results of the antitoxin treatment of diphtheria are not to be decided "by collocations of Arabic numerals."

I entirely agree with this gentleman, albeit he was conveniently oblivious to the fact that all the reports—especially that of the Asylums Board, then under consideration—in favour of the success of the remedy have been calculated on percentage results, and therefore the position was only to be met by quotations of similar figures in the opposite direction.

Armstrong (New York).	Lahs (Marburg).
Benesch (Austria).	Langerhans (Berlin).
Bergmann (Berlin).	Lebreton (France).
Bernheim (Berlin).	Leichtenstern (Kota).
Canon (Berlin).	Macintyre (Glasgow).
Coakley (New York).	Magdelaine (France).
Elmer Lee (Chicago).	Mundorff (New York),
Ernst (New York).	Oertel (Munich).
Fürst (Berlin).	Perrigaux (Paris).
Gayton (London).	Rosenbach (Breslau).
Gerloczy (Buda-Pest).	Schleich (Breslau).
Glaser (Hamburg).	Soerensen (Copenhagen).
Gottstein (Breslau).	Soltmann (Leipzig).
Hagenbach (Basel).	Springorum (Magdeburg).
Hansemann (Berlin).	Stowell (New York).
Heller (Nürnberg).	Struck (U.S.A.).
Kassowitz (Vienna).	Variot (Paris).
Kohts (Strasbourg).	Vissman (New York).
Kraske (Freiburg).	Vulpus (Karlsruhe).
Kretschmann (Munich).	Wendlstadt (Kota).
Krobrynsky (Kolomea).	Winters (New York).
Krückmann (Neu Kloster)	Zappert (Vienna).

This list—mainly taken from abstracts published in this journal for 894-95-96—does not include the large number of observers who have had to admit that the serum treatment is accompanied by complications, and is responsible for sequelæ, some of which have increased the fatalities from the disease beyond that which was formerly observed under the older methods of treatment; for instance, cardiac failure (Baginsky), hæmorrhagic nephritis (Soerensen), albuminuria (Oertel, Hansemann, Benda, and Siegert), and petechiæ and fatal gastro-enteritis (Hagenbach); while other accidents, not always fatal, have been responsible for undue retardation of complete recovery.

To this list also must be added many observers—*e.g.*, Klebs, Fraser (Edinburgh), and Kortright—who, believing in the value of the serum when administered for the cure of the actual disease, have failed to support, or have withdrawn their adhesion to, the immunizing power of the serum when administered for prophylactic purposes—albeit, as Behring himself has put it, “the possibility of cure depends on the possibility of immunization.”

As an instance of how enthusiasm may blind observers to facts, the ratio of cases failing to be protected against the disease when immunization has been practised to any appreciable extent is alone sufficient to demonstrate its futility.

For example, Kassowitz reports that in Halle, of 125 immunized children in the clinic, 3 caught diphtheria, whilst of 50 others in similar circumstances, and not immunized, only 1 was affected. This author pertinently observes that where the disease itself cannot prevent a second attack, it would be curious if an artificial substance would do it.

I have no desire to press home too hardly the danger of an immediately fatal result of serum injection, of which an appreciable number of cases

have been reported; but such a risk is alone sufficient to condemn a prophylactic administration. Many other cases of alarming but not always fatal collapse are also recorded, where the remedy has been applied to the disease; and it is but fair to assume that to the injection, *per se*, many deaths should be attributed.

It has been largely claimed that the great advantage of the serum treatment is, that it is founded on a scientific basis; but from whatever practical point of view we may consider this dictum, it is difficult to see the grounds on which it can be sustained.

For example, it has been advanced that antitoxin counteracts the disease caused by the Klebs-Loeffler bacillus; nevertheless this organism is to be found for weeks and months after the membrane—the result of the bacillus—has entirely disappeared. The membrane itself has not been shown to separate more speedily under serum injections than by former methods of treatment; nor, finally, have the typical complications and sequelæ of the systemic toxæmia been less frequent or less severe in the antitoxin cases.

On this point Sternberg, an ardent advocate of serum therapy, while expressing the opinion that “the experimental and clinical evidence heretofore submitted appears to establish the value of the treatment when applied before the disease has progressed too far,” says “it must be remembered that the antitoxin has no power to destroy the diphtheria bacilli, or to relieve the suffocation resulting from obstruction of the larynx, or to cure an acute parenchymatous nephritis due to the action of the deadly toxin elaborated by the Klebs-Loeffler bacillus.”¹ May we not well ask what does the antitoxin cure?

On the other hand, on the first introduction of serum injections, we were told by Roux and others that all supplementary treatment, either local or general, was harmful to the success of the serum; but there is now hardly one advocate, however enthusiastic of antitoxin, who does not supplement it by the use of germicidal solutions—*e.g.*, corrosive sublimate—of a concentration of almost infanticidal intensity—to assist in destroying the bacillus; and of sprays, as of sodium carbonate or lime water, for assisting the separation of the membrane. In the same way, perchloride of iron continues to be administered internally to correct the deterioration in the quality of the blood; quinine and strychnia to combat the degeneration of nerve structures; and alcohol to counteract the systemic asthenia, all specific characteristics of the malady.

Nor, if we examine the scientific basis of the treatment from a bacteriological point of view, can we admit that anything like a fair proportion of the cures attributed to its use is due to impregnation of the serum with the specific toxin, seeing that the Klebs-Loeffler bacillus is only to be found alone in less than ten per cent. of the cases; and that in only this class—according to some of its apostles—should the serum be administered. Indeed, no less an authority than Loeffler, himself only a moderate supporter of antitoxin, has said that “coccal infections cannot be favourably influenced by serum.”

By an analysis of the figures of the Metropolitan Asylums Board for 1895, the mortality of cases treated without antitoxin in that year was

¹ “Immunity and Serum Therapy,” p. 168. New York, 1895.

13·4, showing a reduction of more than half that of 29·6, the proportion observed in 1894, before the introduction of antitoxin, and an almost equal reduction over that of those treated concurrently by serum, viz., 28·1. The experience of Winters is curiously parallel. He reports that in the Willard Parker Hospital, New York, there was in 1895 a mortality of 10·6 per cent. greater with antitoxin than without in 1894. In the New York Foundling Asylum in 1894 (non-antitoxin year), 24 per cent.; mortality in 1895 (antitoxin year), 45·7 per cent. In the Municipal Hospital, Philadelphia, the mortality with serum was 28·1 per cent.; without serum, 25·9 per cent. The same careful investigator has shown that this species of anomaly may also be found on examination of many Continental returns.

To what is this marvellous reduction in mortality to be attributed? Not, certainly in London, to change in sanitation or hygiene, for happily these are well-nigh perfect in our metropolitan fever hospitals; not to improvement in medical ordinance, for we are expressly told that "no change has taken place during the year in the local treatment of the cases, nor has there been any new factor in the treatment other than the injection of antitoxin"; nor—as I have demonstrated elsewhere, especially in regard to those observed in infant life—was it due to the cases treated with serum being severe ones, whilst those treated without antitoxin were mild. Indeed, it is altogether evident that the improved death rate can only be ascribed to the much greater medical vigilance and nursing care which all cases have received since a spurt has been given to the study of this disease. And whether antitoxin should in the end justify all that is claimed for it by its apostles, or no more than some of us believe to be its due, its introduction must be gratefully hailed by both advocates and detractors on account of the "deepening of the interest" with which treatment of this horrible scourge is now surrounded, and with such happy effect; much in the same way as better results in the general surgery of our present time can only be achieved by those few who still oppose Listerism, on the condition of the strict observance of those laws of cleanliness which are absolutely inseparable from Listerian principles.

One point more. It has been stated that the main factor in the comparative failure which has hitherto attended the serum treatment in this country "is the simple fact of insufficient dosage"; but according to figures often repeated, and up till now unimpeached, the mortality in one of the Asylums Board hospitals during the latter part of 1895 was twice as great as that in the earlier,—in other words, in the period when the supposed advantage of much larger doses was accepted and enforced.

But it may be asked, do I deny that there is any benefit whatever to be derived from serum treatment, and are the numerous reports in its favour to be contemptuously ignored as mendacious or untrustworthy? By no means. But I contend that the benefits equally with the dangers are due to the injection of large quantities of albumen, and I am proud to be able to quote Soerensen and Oertel as two of the many authorities of repute who agree with this view. On such an hypothesis it is probable that the serum supplies dynamic force, enabling the patient to withstand the prostration due to the toxæmia, and thus—admitting that the powers of assimilation in children vary—we can understand why large doses are

required by some, and why comparatively small doses produce noxious effects in others.*

We can likewise appreciate the better results obtained in those cases which are earliest treated, although this is a point which has been insisted on with regard to serum, with a *naïve* oblivion of its application to every treatment of every disease.

We can likewise appreciate that the serum may be beneficial at a date prior to that at which brandy, strychnia, etc., would be indicated, and it is not impossible that an anatomical reason could be given why the larynx, when attacked with diphtheria, is more susceptible to improvement under the serum treatment than the fauces.

This suggestion as to the value of albumen *per se* is strengthened when we remember that antitoxin in which the bulk of albumen has been reduced to a minimum by desiccation, has been found to give less satisfactory results than those obtained by the use of liquid serum.

I would not venture to contradict those who may ascribe these differences of result to a deleterious effect on the antitoxin produced by the desiccating process, for, ignorant as we are of the exact chemical nature of the toxins and antitoxins, no one is in a position to dogmatize on this point; but it may be remarked that the antidiphtherin of Klebs, —a non-albuminous fluid obtained from cultures of the bacillus—has after due trial been abandoned as of no value. We are justified on all these grounds in ignoring the whole question of an antitoxic influence, and especially when we remember that the proportion of cases claimed for benefit under the treatment is considerably greater than those in which the Klebs-Loeffler bacillus is found unmingled with cocci—these last being declared by Loeffler to be not favourably influenced by antitoxin. It is further to be once again noted that in no case have the actual toxic results of diphtheria, such as cardio-respiratory paralysis, nephritis, and neuroses, been in any way diminished—some, indeed, claim that they have been increased—in those patients who survive injections.

In view of all these facts, I venture once more to urge, as Soerensen has done, that at least equal benefit in all parts of the world might result from the injection of normal saline solutions, or, although that is more hazardous, by the injection of simple sterilized blood serum, as advocated also by Grawitz.

EPITOME.

Summing up the foregoing it would appear:—

1. That objections to the claims for antitoxin do not come from one or two writers, but from authorities in all parts of the world.
2. That the basis of comparison of the new treatment with the old, as adopted by enthusiasts, is unfair.
3. That percentage mortality is also misleading.
4. That the gross mortality from diphtheria in this and other large cities has not decreased.

* The results of "The Lancet" commission on the relative strengths of diphtheria antitoxic serum, although probably not so intended, are quite in favour of the proposition that the value of the antitoxic serum does not depend on the antidotal element; first, because of the actual and considerable discrepancies between the advertised and the contained number of "immunizing units" in samples obtained from different sources; and, secondly, because while advocating higher strengths—3000 units, for example, as recommended by Behring in severe cases—it is stated that as much as 20,000 units may be and often have been used beneficially, and without apparently doing harm. Surely this is a unique therapeutic experience of a remedy claimed to be potent.

5. That to the increased attention given to the subject by the introduction of serum is the improved mortality mainly due, for the death rate of cases treated with serum is out of all proportion greater than that of cases treated without it in the same hospitals.

6. That this is especially true in the case of children attacked under five years of age, the period of life at which diphtheria is admittedly most fatal.

7. That the value of immunizing injections of antitoxin with a view to prevent diphtheria is but slight, and cannot outweigh the dangers of the procedure.

8. That the scientific basis on which the treatment is founded cannot be sustained by any practical test, especially since internal medical and local treatment, as formerly adopted, is still continued.

9. That the benefits equally with the dangers of antitoxin are due to the albumen in the blood serum, and not to any special antidotal element.

10. That the assertion that the comparative failure of antitoxin in this country is due to insufficient dosage is not sustained by the figures now available.

There are many other points that could have been mentioned in this postscript, but most of them have been treated elsewhere. Allusion must, however, be made to the variability of the immunization of the horses, as well as the impossibility of insuring the perfect purity of the horse serum by tests to eliminate the presence of tubercle or of glanders, as if the absence of these taints exhausted all possible sources of impurity.

SOCIETIES' MEETINGS.

BRITISH LARYNGOLOGICAL, RHINOLOGICAL, AND OTOLOGICAL ASSOCIATION.

President—Dr. WM. MILLIGAN, M.D.

PRESIDENT'S ADDRESS.

Gentlemen,—My first duty on taking the chair is to offer to you all my most hearty thanks for the honour you have conferred upon me in selecting me to fill the important post of President of this Association for the coming year.

No one is more fully alive to the fact than I am myself that I cannot possibly fill the post with that distinction and capability which has marked the presidential reign of my distinguished predecessors ; but at the same time, while fully conscious of this, it is my firm intention to throw myself with all possible energy into the work which lies before me, and with the co-operation of my friends upon the Council and the aid of our new and esteemed secretaries, to advance in every way possible the interests of this important Association.

Although our Association is a comparatively young one, it has the great merit of being the first established society of its kind in the British Islands ; and whilst embracing upon its roll of Fellows many of the most

distinguished laryngologists in the kingdom, it has also the honour to include many well-known confrères in Germany, France, and America.

The gentlemen whom we have just had the honour of electing as Corresponding Fellows will, I feel confident, still further increase the reputation of this Society, and will help to cement those feelings of friendship and *bonhomie* which should bind together in a close and amicable relationship those whose main objects are to endeavour to further the progress of medical knowledge and to ameliorate the condition of suffering humanity. No two objects could be better attained than by meeting here as we do upon common ground, prepared to discuss and dissect each other's opinions, to gain and to impart any special information which we may possess, and to solidify friendships which have been made, but which unfortunately distance and the demands of professional work cruelly interfere with. To my mind, there is nothing more refreshing and mentally invigorating than meeting one's *confrères* for the discussion of questions of diagnosis and of treatment openly and without reserve. Such functions are, I think, admirably served by our quarterly meetings, and prove to many of us an incentive and a stimulus to better work and to higher aspirations.

Gentlemen, what is it which justifies our existence as a body of men striving to grapple with and to overcome the many difficulties which beset the path of him who would attain to eminence in his profession? Is it not that the growth of knowledge, the enormous accumulation of facts, and the never ceasing progress of the age, demand that some of us, at any rate, devote our time and our energies to the prosecution and practice of some special subject or group of subjects? In the acquirement, however, of special knowledge, and in the desire to be recognized as the possessors of the same, there is perhaps a tendency to limit the field of our observations—to narrow our mental horizon. This is an imputation frequently cast at the heads of specialists, but I would fain believe that, in general, at any rate, it is undeserved. To prove that it is so should be our aim and our ambition. No mere hankering after trivial details should be tolerated. A broad and a comprehensive grasp of our subject should be our goal. Let us never forget that the special organs whose habits, whose diseases, and whose life history we are especially interested in are after all but a portion of the human mechanism, a mechanism as wonderful as it is intricate, as beautiful as it is perfect. To steer safely through the many and perplexing questions which daily confront us, we must all—physicians, surgeons, or specialists—train our powers of accurate observation as efficiently as is possible. No quality is more requisite in the medical man, no quality is of more importance. At the present time, with our many and our improved methods of diagnosis, our beautiful instruments, and the many aids we derive from chemistry and bacteriology, the tendency is perhaps to trust too much to what, perhaps, I might call a "laboratory diagnosis" rather than a diagnosis made at the bedside from careful and accurate clinical observation.

It has been truly said that "to cultivate the powers of the eye so that "it shall be the entrance gate of the largest possible amount of instruction and delight is one of the great ends of all education." Yet how

many of us disregard this wholesome advice, and how much do not we lose by neglecting it!

In many the powers of observation are certainly developed to a much greater degree than they are in others, but all of us, by careful training, by conscientious effort, can do much to educate and improve the powers we possess. The very fact of the slowness with which the human eye gradually acquires its power shows that nature's plan is that it should be educated. Look at that most charming and wonderful of all beings, the infant in its cradle. Watch how it gazes vacantly and dreamily into space with no perception of size or distance. Watch how, as days and weeks pass by, perception becomes a more definite reality, how the vacant gaze becomes an intelligent glance, how "the eye reflects the soul within."

"But what am I? An infant crying in the night, an infant crying for the light."

Take, again, the practised eye of the mariner—how his keen sight descries the sail upon the distant horizon. Is not this faculty the outcome of training, of long and patient observation? How true are Carlyle's words: "The eye sees what it brings the power to see."

The want of accurate powers of observation is largely attributable to neglect in early training, and nature has her sure revenge, for with her "misuse is as much a sin as abuse." One of the most interesting records we have of what may be done in the way of education by careful and intelligent observation is to be found in Hugh Miller's account of his "Schools and Schoolmasters," where he tells us that the best schools he ever attended were schools which were open to all, and that "the man who keeps his eyes and his mind open will always find fitting, though it may be hard, schoolmasters to speed him on in his lifelong education." The schools in which he learned so much were the pebble-strewn shores of Cromarty Firth, where in his boyish rambles his quick eye soon led him to distinguish and to become interested in the various varieties of stones and rocks. This led him to cultivate habits of careful observation, habits which laid the foundation of his future brilliant discoveries as a geologist. He was then but a poor working lad, with but scant opportunities of procuring the advantages of books or what is ordinarily called a good education. As we read the story of his life, however, we cannot but see how it was that those carefully cultivated habits of observation raised him above the ranks of his fellow-workmen, how they educated him in the truest sense of the word, and how they refined and enriched his life.

We see the results of this same keen, careful observation of nature in the case of the artist and the poet. What is it that enables the artist to discover in a landscape innumerable beauties which escape the eye of the ordinary spectator? It is not merely that he has a gifted artistic temperament, but it is that he has by careful study trained his eye to detect those peculiar features which give individuality and character to the scene.

And the same holds good with the poet. Think of Wordsworth, pre-eminently the poet of nature. It was his wonderful keenness and faithfulness of eye, trained by years of earnest study, which enabled him to see what remained hidden to the careless observer; and who in reading

Tennyson has not marvelled at his wonderful delineations of nature, and felt how no mere poetic taste, but only patient, close, and loving observation of nature, could have enabled him to portray her as he has done? Take his description of the appearance of an ash tree in the early spring, when he says, "*Black* as ash buds in the month of March." It needed a careful observer to speak of them thus, and yet how exactly true the description is. Or, again, when he tells of the lone heron who "lets down his other leg, and, stretching, dreams of goodly supper in the distant pool." Or when in "*Locksley Hall*" he describes with such faithful exactness how—

" In the spring a fuller crimson comes upon the robin's breast ;
In the spring the wanton lapwing gets himself another crest."

And again—

" In the spring a livelier iris changes on the burnished dove."

Surely these vivid descriptions are due not merely to poetic intuition, but also to carefully educated habits of observation.

As Prof. G. Wilson has truly said, "All come infinitely short of what they should achieve were they to make their senses what they might be made. The old have outlived their opportunity . . . but the young can so cultivate their senses as to make the narrow ring which, for the old and infirm, encircles things sensible, widen for them into an almost limitless horizon."

The special departments of professional work which we have selected as our life's work are admirably adapted to call forth those qualities of observation of which I have spoken at some length.

Keen observation coupled with an accurate and comprehensive knowledge of our subject are, I take it, the main qualities requisite for success. Let us spare no pains to keep pace with the progress of our speciality, and let it be our ambition to add some fact to the sum total of human knowledge—some fact which may be useful, which may teem with wisdom, which, long after we have left this mortal coil, may redound to our credit, and to the credit of our profession.

" Knowledge comes but wisdom lingers, and I linger on the shore ;
And the individual withers, and the world is more and more."

The vitality of our Association, the value of the work which has been, and which is still being, done are facts which cannot be gainsaid. The most cursory glance at our published "*Transactions*" should, I think, convince even the most sceptical that this is so. Last summer's work alone is a proof of this, and I think that any association might and should be proud of the published records of the summer meeting of 1895. The many important subjects then discussed, the intrinsic worth of the contributions, and the value of the advice then offered, will, I feel confident, stand out as bright landmarks in the history of this Society.

The departments of laryngology and rhinology have assumed an importance which must be most gratifying to those who in the first instance guided their progress along the thorny paths of opposition and of prejudice.

How much easier is it for us now to tread those paths made comparatively smooth by the labours of our predecessors !

But our duty is to advance, to penetrate into new territory, to add discovery to discovery, conquest to conquest. Are we not constantly

besieged by a host of unseen foes, foes who come up to the very portals of our citadel, and would fain gain an entrance but for the vigilance of our sentinels?

Gentlemen, our duty is to tend those sentinels—to keep the great army of leucocytes in such a state of efficiency that, even if the threshold of our fortress is passed, advance is rendered well-nigh impossible by the devouring powers of our white-robed protectors. That most charming romance of modern pathology, Metchnikoff's theory of phagocytosis, opens up for us a new vista of thought, of observation, and of labour.

The necessity of maintaining the mucous membrane of the fauces, pharynx, and naso-pharynx in a healthy state must now be admitted by all to be a matter of the very first importance. Recent researches have shown that large numbers of phagocytes pass from the normal adenoid tissue—so abundant in this region—into the cavity of the pharynx along with mucus from the surrounding mucous glands. It is, I think, also fairly well admitted that these phagocytes play an important *rôle* in devouring micro-organisms introduced along with food and air, and thus that they exercise the important function of protective agents. The numerous lymphatic tracts, with their manifold ramifications so freely distributed in the submucous tissues of this region, become readily affected by disease should these phagocytes fail in their duty, or should breaches of continuity occur in the mucosa. When thus affected systemic involvement readily takes place, and often with most serious results.

Chauveau and Sims Woodhead have shown with what frequency the cervical lymphatic glands become affected by tubercle bacilli which have gained an entrance by way of the tonsils. Dieulafoy has also shown that a certain number of cases of enlarged tonsils and of naso-pharyngeal adenoids are in reality tubercular in nature. In some the action of the phagocytes is sufficient to prevent the farther inroad of the bacillus, but in others it gains an entrance through these portals, attacks the lymphatic glands, and from the lymphatics connected with these glands finally reaches the general circulation, and so the lungs.

Semon has also demonstrated that the micro-organisms of various septic states of the pharyngeal mucosa gain admittance into the general circulation through these same portals. How important must it not then be to maintain the mucosa in a state of efficiency!

While not for one moment wishing to discredit the value of general treatment and of general precautions, I maintain that the systematic and thorough treatment of any lesion in this neighbourhood, which, in the first instance, at any rate, is local, should never be neglected. Too often this local treatment is neglected, and valuable time is thus allowed to slip by—time when in all human probability most good can be done for the patient. I need only instance the value of the early local treatment of tubercular or malignant ulcers before the lymphatic plexuses and glands have become hopelessly involved.

Besides laying stress upon the value of local treatment I would again urge the importance of the minute observation of local departures from what we have been educated to regard as the normal condition of parts. All of us have probably frequently observed that peculiar anæmic condition of the laryngeal mucosa, the precursor of laryngeal phthisis, and

the early fixation of a vocal cord, the forerunner of malignant disease of the part.

Such early indications of disease are naturally of the utmost importance, and the more keenly we train our powers of observation to detect such early changes and to estimate correctly their value the better will it be for our patients and for ourselves.

In our age, practical if it is nothing else, and in our time, when competition is brisk and the struggle for existence is keen, we are, perhaps, as a nation too apt to be satisfied with devoting our thoughts and energies to the attainment of things tangible often at the expense of scientific progress. And, yet, is not the maintenance of the health of the people one of the great, if not one of the greatest, bulwarks of national prosperity? I can imagine nothing of more value and of greater practical import to the nation than the encouragement of scientific research by a generous and open-handed Government, the making it worth the while of the young and enthusiastic scientist to devote his time and his brains to the elucidation of the many intricate problems which surround the health of the people. Were more facilities afforded, more encouragement given, and better remuneration offered for such work, we should as a nation soon attain that pre-eminence in science which we already hold in our naval, commercial, and diplomatic relations. And would the funds required for such a purpose and expended upon the furtherance of scientific research be missed for one moment from the pocket of this great and prosperous nation?

The difficulties which surround the differentiation of many throat lesions from one another in their early and consequently important stages, and the disastrous consequences which so frequently attend their non-recognition, are in themselves powerful arguments in favour of encouraging local authorities to provide in each great centre some laboratory accommodation with skilled attendance, where medical men can procure the assistance afforded by recent advances in bacteriological research. How many epidemics of diphtheria, for instance, are not directly due to children attending school and mixing indiscriminately with their companions while suffering from some form of membranous sore throat? How much more easily could the disease be recognized and stamped out were such facilities afforded by the proper authorities.

I am happy to think that already in some centres this desideratum has been supplied, but I would fain see the system universal. The strides which science has made, and the practical issues which have resulted, should, in my opinion, be recognized by the State's affording better opportunities for scientific research.

Gentlemen, I feel that I cannot conclude this address without saying a few words upon the recent addition of otology to the work of this Association, an addition which I confidently hope may prove to be a move in the right direction, and may be the means of bringing within our midst many workers in this highly interesting and important department.

It is somewhat strange that while our Continental and American confrères have had Otological Societies in full work and vigour for many years past, we in this country, until the inclusion of this subject under the mantle of this Association, have had no special society for the discussion of

problems of otological interest. It is not my intention to weary you with a detailed history of the progress of otology from the time of Hippocrates and Celsus down to the present day, but I would make bold to say that the advances made in otology during the last few years bear favourable comparison with advances made in other departments of medicine and surgery. No real advances are made by leaps and bounds. Genuine progress is only attained after the expenditure of much labour and the burning of much midnight oil.

"Science moves but slowly, slowly creeping on from point to point."

Otology, perhaps, more than any other medical or surgical subject, has had much to contend against. The unfortunate sufferer from deafness, from whatever cause, has been, and still is too apt to be, voted a nuisance and a bore, and one upon whom it is useless to expend one's pity.

What a different degree of sympathy does not the blind man receive from his fellow creatures! And can anyone truly say that the loss of the sense of hearing is not just as great a burden to bear as is the loss of sight? Charlatanism and quackery, which have done so much to discredit the practice of aural surgery, are, I trust, being fast annihilated, and their places taken by knowledge and scientific truth. The time has long since passed when diseases of the ear, from whatever cause arising, are to be treated by drops, by stimulating applications, and by the insertion of wool in the external auditory meatus, or, to speak more correctly, by the insertion of a small pledget of black wool from the left forefoot of a six-years-old black ram!

The dawn—I might truly say the mid-day—has fully burst upon the otologist, and I look hopefully for a fruitful eventide. Emancipated from superstition, from quackery, and from prejudice, the aural surgeon of to-day turns to his subject conscious that he must work upon true scientific lines—that he must bring to bear upon his work those established principles of medicine and of surgery which, while applicable to diseases of other organs, are equally applicable to diseases of the ear. Is not the ear but a part of the whole economy? Why, then, should it not be amenable when diseased to the same principles which guide us in the treatment of diseases of other organs? Gentlemen, I look forward to the future of otology with hopefulness. I see in it a department which has not received its full share of interest and study, but a department which is daily receiving more and more attention, and which will, I trust, in the future take the position its importance demands. I would venture to urge the necessity of studying more minutely those pathological problems which surround and enshroud many diseases of the ear. Without a true appreciation of pathology how can we hope for or expect to see improvement and progress in our methods of treatment. Take, for instance, that terribly frequent and oftentimes hopeless disease of the middle ear, progressive sclerosis of the tympanic mucosa. Is it a catarrhal process in the true sense of the word? Is it due to some tropho-neurosis? or what is it? Here, indeed, is a field for work, for research, and for discovery. Would not the man who could unfold this tale and show us how to cure the disease, or, at any rate, to effectually stay its progress, be a benefactor to his race?

How frequently are we not consulted by patients suffering from that most troublesome symptom "tinnitus," and how frequently do we not prescribe for such patients without having in our minds any real or definite idea of what this symptom is due to, of what the pathological basis of its existence really is !

Then, again, have we a minute and accurate knowledge of diseases of the internal ear? Are not several of our methods of diagnosis of labyrinthine lesions somewhat empirical? Do we not frequently treat supposed diseases of the auditory nerve, either central or terminal, with but scanty knowledge of where the lesion exists. The illustrious Toynbee set us a good example in this respect, but few, I fear, who have followed him have worked upon the pathology of ear diseases with the vigour with which he did.

You may say that pathological material is hard to obtain, and that even when secured it is from the very nature of its surroundings difficult to manipulate ; but it can be got, and many intricate problems might be unravelled were its study systematically pursued.

Careful analysis of cases, careful clinical records, and, wherever possible, careful *post-mortem* notes, will not only add to the interest of our daily work, but may be the foundation of important generalizations later on.

Upon what lines, then, are we to look for progress? I venture to say that one of the very first essentials is that succeeding generations of medical students should be systematically taught and examined upon the elements of aural surgery. Everyone in this room will, I think, corroborate me when I say that the number of acute cases seen in practice—in hospital practice, of course, more especially—is infinitesimal as compared with the number of chronic cases seen. How many paracenteses, for instance, does any single aural surgeon perform in a year for acute suppurative inflammation of the middle ear with intact membrane? Do not the patients as a general rule come to the clinics after days of acute suffering and when nature has relieved the existing tension by spontaneous rupture of the membrane, sometimes small, sometimes large—often, too, at the expense of the organ as an organ of special sense, sometimes even at the expense of the patient's life? And yet how satisfactory are such cases when seen early; how readily they recover if properly and rationally treated, and with what wonderful success so far as regards the preservation of the special function of the organ. Again, how many of us are consulted by patients the victims in adult life or in middle age of the effects of the presence of adenoid vegetations as children: consulted at a time, too, when cure of existing ear trouble is often wholly out of the question, and where it may be difficult even to arrest the progressive character of the disease? The whole history of the relation of nasopharyngeal diseases to diseases of the middle ear is an excellent example of the results of accurate observation and of inductive reasoning. To Wilhelm Meyer the profession are indebted for the clear and lucid manner in which this important relationship was first prominently brought before the profession. The masterly way in which his exposition was made, the great practical value of the discovery, and of the

means devised to treat it, are too well known and too well appreciated to require any reiteration before an audience such as this.

To-day we mourn his loss—the loss of a great man and true—but his memory will ever be cherished as one of the great benefactors of mankind. How many men of to-day owe the integrity of their organs of hearing to the genius of Wilhelm Meyer it would be impossible to say, but the number must be legion. A grateful profession, and I trust a sprinkling of a grateful public, has subscribed to perpetuate his memory by the erection of a statue in his native town of Copenhagen—a just and a pleasing tribute to the memory of a man we honour and revere.

To remedy such a state of affairs—this want of recognition of disease in its earliest stages—we must educate the medical student to observe, and to observe intelligently. Far be it from me to wish to add another burden to the many burdens the student of to-day has to bear, but what I would rejoice to see would be the transference of biological and chemical work from the purely college life of the student to the last year or couple of years of his school life. The great demands made upon the student of to-day, the enormous amount of purely medical and surgical knowledge he has to master, are to my mind amply sufficient to fully occupy the whole time of his five years' course. At present there is no denying the fact that many students pass from our universities and our hospitals without ever having seen a normal or a diseased membrana tympani. Under such circumstances how can we expect such men, students of to-day, doctors of to-morrow, to recognize the incipient stages of disease in a special organ? Surely it is to this early recognition of disease, and to its prompt and rational treatment, that we must look as one of the first and foremost means of advancing our subject.

The development of surgery and the discoveries of bacteriology have done much to assist the aural surgeon, and to the many workers in these departments we owe a deep debt of gratitude.

The importance of suppurative affections of the middle ear, and the grave results which so frequently follow the neglect of the same, is gradually dawning upon the profession, and I might say upon the public also. The day has not yet passed, however, when we hear such advice given as "Let the ear alone; the patient as he grows older will grow out of his deafness"; or the advice that "it is not safe to stop a running ear."

One can imagine the various streptococci and staphylococci rejoicing in such advice, and saying to each other that at any rate their day of reckoning has not yet arrived. But that it shall arrive, and that speedily, is practically certain. Gentlemen, I think that the aural surgeon is to blame in this respect. Too long has he delayed, and too long does he still delay, in adopting those general principles of surgery which apply to suppurative affections in other parts of the body. What is the result? Gradual and maybe painless erosion of the surrounding bony parts, infective thrombosis of venules and lymphatic radicles, and finally deep-seated intracranial suppuration, general or localized. Conservative treatment may be right, and may be justifiable under certain circumstances; but in a very large proportion of cases I hold that it is wrong, and that

more radical interference is demanded, based upon the knowledge that we have in the recesses of the middle ear and mastoid antrum (the very ideals of a good incubator), swarms of unseen but deadly foes, foes ready to spring upon and devour us.

The terrible havoc and the permanent damage so frequently done to the ear during or subsequent to attacks of exanthemata, scarlet fever, measles, etc., are unfortunately matters of everyday observation. Hardly a day passes but some patient is brought to our consulting-room or to our hospital clinic with perforated drum, foetid discharge, presence of granulation tissue, or deep-seated caries, with injured hearing and with blighted hopes, and with the same well-worn tale: "Doctor, this came on as the result of scarlet fever." Now, gentlemen, should such a state of affairs exist towards the end of this the nineteenth century? Are these post-scarlatinal cases of such virulence that all this damage should so frequently be observed as a sequel? Do our private cases, when we are fortunate enough to be called in during the early stages of the disease, behave in this way? I am sure that everyone here present will say that they do not. I will make bold and say that in general such results are the outcome of the non-recognition of the inflammatory process at its commencement, and to imperfect treatment when once the disease has declared itself. The resident medical officer or officers in our great fever hospitals are so taken up with the gravity of the disease and the danger to life of the many fever-stricken patients under their charge, that one cannot expect them to give that amount of detailed attention which is requisite when any special organ is seriously involved, even had they the requisite knowledge and manipulative skill. But the damage done is of such a far-reaching nature and of such immense moment to the patient, that I would fain see a movement set on foot and successfully carried into practice—a movement to appoint to each large fever hospital a competent aural surgeon, whose duty it should be to examine all patients whenever a suspicion of ear trouble exists, and whose duty it should be to seek to stem the tide of the advancing inflammatory process.

How much deaf-mutism might thus be prevented, how many lives might in this way be rendered happier by the retention of the powers of hearing, it is of course impossible to say; but that great good would accrue and much suffering and unhappiness be thus obviated, is, to my mind, quite certain.

Bacteriology with its enormous advances has put an entirely new complexion upon the duty we owe to our patients the victims of suppurative middle-ear disease. Much, no doubt, yet remains to be done. Doubtless certain organisms possess more virulent properties than others, and if proved to be present in excess in the secretions radical treatment may be at once demanded. A time may come when it may be possible to classify suppurative diseases of the middle ear according to the predominating organism, and when definite laws may be laid down as to the precise method of treatment to be adopted; whether, with certain organisms predominating, conservative remedies may be justifiable or whether radical measures are imperative.

Here also is a field for observation and research. Then, again, do we

fully recognize what the toxic effects of the products of these organisms may be upon the system in general? Who has not been struck with the anæmic or chlorotic appearance of many patients the victims of suppurative middle-ear disease? May not the diseased middle ear, the factory in which micro-organismal life with all its toxic properties and effects is elaborated with unceasing energy, be responsible for many of these blood changes? May not the great army of leucocytes be gradually overpowered by constant warfare with these unseen foes? Much, I believe, remains to be done in the study of the life history of these organisms, and more especially in the study of their bye-products and their chemico-pathological effects.

Gentlemen, time does not permit of my elaborating or speculating any farther upon possible lines for future work, but that otology has a great and useful future before it I confidently believe; and I am sure I echo the sentiments of everyone here present when I say that if this Association is the means of advancing the knowledge of those subjects the welfare of which we have at heart, we shall at any rate have the satisfaction of knowing that our labour has not been in vain.

"Who loves not knowledge? Who shall rail
Against her beauty? May she mix
With men and prosper! Who shall
Fix her pillars? Let her work prevail."

SOCIÉTÉ DE LARYNGOLOGIE, D'OTOLOGIE, ET DE RHINOLOGIE DE PARIS.

July 10th, 1896. ("Arch. Internat. Laryng.," July and Aug., 1896.)

President—M. LUC.

M. COLIN. *Treatment of Leptothrix Mycosis by Perchloride of Iron.*

Under this title the author recounts a case which had resisted all ordinary treatment, and which was cured by swabbing with perchloride of iron solution.

Modification of Stacke's Operation.

M. GELLÉ describes a new method of resecting the postero-superior wall of the meatus. His object is to avoid the chance of wounding the facial nerve and the horizontal semicircular canal. To this end, after opening in the usual manner the mastoid cells and the infundibulum of the antrum, he relinquishes the chisel and mallet, and makes use of a small chain saw to cut away the remaining bridge of bone. The links of this chain are short, and the instrument passes with ease from the antrum into the open tympanum, guided by a wire previously introduced. Two chain cuts are made, one from above downwards, directed towards the apex of the apophysis; a second horizontal. By this means all cutting of the deep parts is made from within outwards, and takes place external to and below the important structures mentioned. After removal

of the angular fragment of bone an excellent view is obtained for subsequent curettage and swabbing. The author has not yet made use of his instrument except on the cadaver.

M. LUC congratulated the author on this ingenious method, and both he and M. MARTIN spoke of the danger attending the use of the curette.

M. HELMÉ spoke in the same terms of the curette, and commended the dental engine.

M. LUC, although he had used burrs and trephines, preferred to confine himself to the gouge and mallet.

Dermatosis of the Face and Disease of the Nasal Fossæ.

M. P. LACROIX recorded three observations in which treatment of various obstructions of the nose had produced, without other treatment, distinct and even striking improvement in disease of the neighbouring skin.

M. LUC considered that it was always desirable to make a careful examination of the nasal fossæ when skin disease was present in the neighbourhood of the nares.

M. HELMÉ had seen the external surface of the nose redden after cauterization for nasal obstruction.

A Fresh Case of Mastoiditis of Bezold.

M. LUC reported another observation of this accident, in which operation was followed by cure. The author remarked that it was interesting to find that during the last six months, since the publication of his memoir in the "Archives," the number of recorded cases had considerably increased.

M. GELLÉ asked if there was any indication in the pharynx.

M. LUC replied that there was none.

M. WEISSMANN asked what was the thickness of the capsule.

M. LUC replied that it was very thin: one or two millimètres at most.

A Case of so-called Mastoiditis of Bezold.

M. LICHTWITZ sent in a memoir on this subject, which will be published subsequently. *Ernest Waggett (Trans. and Abst.).*

BELGIAN SOCIETY OF OTOTOLOGY AND LARYNGOLOGY.

Meeting, June 7th, 1896. (Continued from page 215.)

President—Dr. DELIE.

M. CAPART. *Pathology and Treatment of Ozoena.*

Ozoena is characterized by an atrophy of the nasal mucosa, specially marked in the inferior turbinated, which is reduced to an almost imperceptible ridge, generally accompanied by a hypertrophy of the middle turbinated, and by thick adherent crusts with a distinct, characteristic smell. There is no ulceration, no necrosis. Thus syphilis, tuberculosis,

sinusitis, and foreign bodies are excluded. The lesion may extend to the pharynx, larynx, and even to the trachea.

The pathology of *ozæna* is very obscure, and I do not presume to be able to settle it now, but will pass in review and criticize the different theories which from time to time have been brought forward.

First, is there a congenital alteration in the shape of the facial bones at the root of the disease? Zaufal maintains that, on account of the atrophy of the inferior turbinates, the ventilation of the nose is bad, the secretions stagnate, dry up, and decompose; hence the smell.

Hopman asserts that in every case the distance from the anterior nasal spine to the posterior border of the vomer is too short, while the height of the nasal cavities is too great. Therefore, whenever the depth of the septum and pharynx is seventy-seven millimètres (the normal) or more, *ozæna* may be excluded; whereas, when the figure is under seventy millimètres, there can be no doubt about the *ozæna*, provided always there are no traces of syphilis.

This seems to me to be going rather too far. Why do these authors not insist on finding similar malformations of pharynx, larynx, or trachea? *Ozæna* develops at all ages, consequently at all stages of development of the facial skeleton. Simple atrophy may exist in very wide noses, and *ozæna* in narrow ones.

Berliner attributes *ozæna* to the hypertrophy of the middle turbinated, which brings it into close contact with the septum. This I have sought for in vain in most of my cases.

Equally incorrect is the theory of Michael and (more recently) of Grünwald, that sinus inflammations may be the cause. Doubtless a sinusitis may complicate the disease; but such a condition must be rare. I have never seen it. It must be remembered that *ozæna* is chiefly a disease of childhood, when the accessory cavities are still rudimentary, whereas, in the aged, *ozæna* tends to disappear, whilst the cavities reach their highest development. The pus from a sinusitis has a characteristic smell, but it is rather that of dental caries than of true *ozæna*.

Löwenberg's (and Massei's) *cocco-bacillus* theory is not convincing—one must always guard against mistaking the effect for the cause; inoculation experiments have, so far, been far from conclusive. None of these theories, then, is satisfactory. On one point all, or nearly all, authors are agreed, viz.: that the substratum or basis of the disease is an atrophic inflammation, a sclerosis of the mucosa. Is this the result of a precedent hypertrophic catarrh, or is it atrophic from the beginning? This is a difficult question to answer, but I incline to the latter view because I have not infrequently seen *ozæna* appear a few days after birth. In any case there is no doubt about the atrophy. Let us now go further, and consider the teachings of microscopic anatomy; and since the disease may coexist in the pharynx and larynx, let us seek for its source in tissue common to all parts. The epithelium becomes paved and even cornified, the glands of Bowman and the acini have generally undergone degeneration and fatty infiltration. Similarly the submucous cellular tissue is degenerate, and is infiltrated with pigment-containing cells, causing the slate-grey colour so familiar in the inferior

turbinated and the septum. Thus the affection is principally of the organs of secretion. Hence it comes that ozæna tends to disappear with old age, when the glands naturally undergo atrophy. Further, Gottstein, Jurasz, and others have drawn attention to an important symptom. One often sees numbers of little greyish brown points on the inferior turbinated, the septum, and the lateral wall of the nose. These are little concretions at the orifices of the glands. They gradually increase in size, one meets and fuses with its neighbours, and thus forms a crust, which dries up and decomposes in the air. Walb says that the pressure they (the crusts) exert may be such as to determine the atrophy of the inferior turbinated.

What, then, is the cause of this atrophic inflammation? Shall we ascribe it (with Zarniko and Rethi) to a trophoneurosis, or shall we not rather ascribe it to a general disturbance of nutrition depending on "scrofula"?

One point more. Is ozæna infectious? Opinions vary, and justifiably; and the only way to arrive at any definite conclusion is by each one of us bringing forward exact and carefully studied statistics of our cases, as was done by our German confrères in regard to cancer of the larynx and diphtheria.

Treatment.—The heroic measures recommended by Rouge, Bardenheuer, and Volkman are not necessary. The nose must be kept clean, and, if possible, aseptic, by frequent injections of sterilized water containing potass. chlorate, sodæ bicarb., or Grünwald's alkaline wash, viz.: sod. chlorate, sod. bicarb., sod. bichlorate, āā, a tablespoonful in a litre of hot water (28-32° C.), or else weak solutions of sod. chlorid., carbolic acid, or potass. permang. By the use of these one obtains lasting cures; the symptoms disappear, the mucous membrane undergoes anatomical changes (revealed by the microscope), and the inferior turbinated often returns to its normal size, etc.

If simple washing is insufficient to remove the crusts, then use Gottstein's tampons.

Vibratory massage, by hand or by electro-motor, has proved disappointing. Cauterization with solid nitrate of silver, with trichloroacetic or chromic acid, sometimes acts well; so also does pyoktanin alone or with vaseline. Walb and Rethi advise deep cauterization with galvanocautery, specially wherever the atrophy appears most marked, their aim being to destroy any glands that still persist. But none of these methods can compare with electrolysis (*vide* the publication by my assistant, Dr. Cheval), specially bipolar. It is no exaggeration to say that one ought to cure 90 per cent. of all ozænas, and that often one sitting is sufficient. With a current of 20 milliampères, twenty minutes is long enough for a sitting. If the patient cannot stand the bipolar method, use the unipolar, with the negative pole on the arm, thigh, etc. If necessary, specially in children, I do not hesitate to administer chloroform: and I have never seen the slightest accident, although I have used this treatment more than three hundred times.

Lastly, let me repeat that my clinic is open to all my confrères, and I am ready to prove the truth of my statements on the worst case of ozæna they can bring to me.

M. DELSAUX. Ozæna means stink—therefore indicates not a disease but only a symptom. A much better name is rhinitis chronica atrophical

Zaufal and Hartmann consider the cause of ozæna to be too large nasal fossæ, whereby the evacuation of secretions by the respiratory current, or by blowing the nose, is hindered so that they accumulate and decompose.

Michael thinks that the starting point is an ethmoidal or frontal sinusitis; but, as Lermoyez points out, pus running over a healthy mucous membrane excites swelling rather than atrophy.

Gottstein's theory is more reasonable: atrophic catarrh of the mucous membrane, which, spreading to the turbinateds, causes them to disappear. The word "catarrh" should be dropped, and replaced by rhinitis atrophica or sclerosis.

Grünwald is of opinion that the atrophy found by histologists is the result of the action of the crusts on the mucous membrane, but is not the cause of the affection. The cause is to be traced to circumscribed centres of suppuration whose secretion has been suppressed by local treatment; sometimes to empyema of the frontal, ethmoidal, or sphenoidal, sinus; or to the presence of adenoid vegetations, in the recesses of which the secretions are retained and dry up. According to him the exudation is always liquid at first, and becomes dry (1) because it is mechanically prevented from flowing away; (2) because the current of air is insufficient to expel it. Compare the opinion of Zaufal and Michael. Tissier maintains the constant presence of a lesion in the bone of what he calls the ethmoidal system; hence the necessity for curettage in treatment.

Mayo Collier attributes ozæna to the existence of an ethmoiditis.

Marsh gives four pathogenic causes: (1) Diathesis; (2) microbic infection; (3) vaso-motor changes; (4) ethmoidal necrosis.

Bresgen has found in all his recent cases a centre of suppuration in at least one of the accessory cavities of the nose, most frequently the sphenoidal.

Examining microscopically, Wingrave has found the following changes (confirmed by Habermann):—

1. Transformation of the ciliated epithelial cells and of the olfactory cells into stratified squamous epithelium.

2. Disappearance of the hyaloid basement membrane.

3. Changes in the glands, from a swelling of the secretory cells up to complete disorganization: the epithelium of the gland ducts resists longer.

4. Changes in the vessels; obliteration of capillaries; diminution and atrophy of the cavernous spaces.

5. The atrophy of the bone is the result of a passive process. The lymphoid tissue in the neighbourhood frequently disappears.

Löwenberg has proved the constant presence of a highly pathogenic *cocco-bacillus*: large bacilli in short chains or in masses, generally appearing as diplococci, staining well with gentian violet and other aniline dyes. It is distinguished from other cocci by its larger size—1 to 1.65 μ . Cornil has verified these results.

Wingrave's theory is most in accordance with our ideas of a chronic

atrophic rhinitis. That a chronic simple catarrh is the precursor of atrophic rhinitis is most probable ; but I cannot admit that a hypertrophy always precedes the atrophy.

The presence of Löwenberg's bacillus cannot be denied ; but as all inoculation experiments have failed, it cannot be regarded as *the* cause of the disease. Two great factors must be kept in mind : (1) the predisposition of the lymphatic or even the scrofulous temperament ; (2) heredity. True ozæna can affect a robust, apparently healthy, individual ; but there are exceptions to all rules.

Ozæna, then, is chronic atrophic rhinitis, with fœtor due to the cocco-bacillus of Löwenberg.

Treatment must be of long duration. Lermoyez even declares that ozæna is, up till now, incurable. First, the crusts must be removed by copious and repeated douchings of the nose ; then they must be prevented from re-forming by continuing the douching during months or years. The douches should be alkaline, antiseptic, etc., and varied frequently. If the parts dry up very rapidly, then apply vaseline with some antiseptic. All so-called curative agents are ultimately irritants ; all increase the blood stream in the parts, and so produce an increased and healthier secretion, etc. The treatment by antidiphtheritic serum tried by Belfanti and Della Vedova has not yet been sufficiently widely tested to justify any conclusion as to its value.

General treatment should be tonic : open air, seaside air.

Prophylaxis must consist in cutting short chronic coryzas, and in teaching children and adults to blow their noses properly.

M. EEMAN wished to ask MM. Cheval and Capart whether, after their electrolytic treatment, the patient left off all washing of the nose. Until he had seen some patients treated by electrolysis some months or a year ago, who since then had used no washes, douches, etc., and who still remained free from the characteristic odour, he should refuse to believe in the efficacy of the treatment, and attribute the whole effect to the douche.

M. CAPART. The cure is manifested by the falling away of the crusts, by the return of the mucosa to its normal aspect, sometimes even by a reconstitution of the previously atrophied turbinated. I have nothing to change in what I said last year ; but I recognize now that the pharyngeal mucosa does not benefit by the intranasal treatment.

The improvement cannot be due to douching, which M. Cheval no longer requires his patients to carry out.

M. BAYER found that six or seven milliampères was as much as his patients could endure, and even this caused very severe pain in the ear of the same side.

One of his patients, a few days after electrolysis, developed a hæmorrhagic otitis media, then a meningitis, and died. This and other cases showed the electrolytic treatment to be dangerous. On the other hand its success in many cases was striking: the odour and the crusts disappeared, and the mucosa became "succulent." He always used douches. He had seen good results in the naso-pharynx from the intranasal treatment. These were necessarily due to some reflex action,

and encouraged one in the hope that laryngeal cases might react in the same way.

In conclusion, he considered electrolysis the best treatment for ozæna, but it was not free from danger.

M. CAPART had never had a single accident, and could only suppose that M. Bayer's misfortunes had been due to faults in technique. Certainly his galvanometer must be wrong, because six or seven milliamperes—and, indeed, far larger doses—ought to be borne with the greatest ease.

M. BLONDIAU considered true ozæna incurable. His treatment consisted in douches and vibratory massage. Electrolysis was effective, but he would like to know if the so-called cures were permanent.

M. GORIS had used electrolysis in eight cases; only one showed marked improvement.

M. SCHIFFERS doubted the efficacy of electrolysis; its action should be to reduce still further tissues already reduced too much. Ozæna in young girls about the age of puberty was the most easily cured; but ozæna in men, with considerable malformation of the nose, was a different matter. Do what one might, it remained incurable.

M. GOUGUENHEIM thought that the etiology of ozæna was variable; therefore, some cases could be cured, others could not. He asked M. Capart what sort of cases he cured.

M. DELSAUX had seen only temporary improvement from electrolysis. He pointed out to M. Schiffers that the + pole (copper), which is the only one introduced into the diseased tissue, had not a destructive but merely an irritant action. He used twelve to fifteen milliamperes with no bad results.

M. JACQUET was sure that M. Bayer's rheostat or galvanometer was out of order: a current of seven milliamperes produced no intolerance.

M. WAGNIER recommended massage.

M. BOLAND proposed the appointment of a special commission to inquire into the question of electrolytic treatment.

The PRESIDENT promised this should be done.

M. ROUSSEAU had done some forty electrolyses without a single accident. In the middle turbinated the needle should be driven in from below upwards, then turned and driven from before backwards. If this were done accidents were impossible. The quantity as well as the intensity of current should be taken into account; for example, a current of five milliamperes used for thirty minutes gave a greater quantity of electricity than one of ten milliamperes used for ten minutes.

M. BLONDIAU. *Reflexes due to certain Pathological Conditions in the Nose.*

M. G. suffered from a constant discomfort in the throat, an irritation producing cough, sometimes in fits, but never accompanied by expectoration.

Pharynx and larynx I found normal, but there was nasal and nasopharyngeal catarrh, and a large septal spur in the right fossa, producing complete occlusion of that side. The patient admitted that he had had syphilis some years earlier. The question, therefore, arose whether the throat condition was due to the syphilis, or was it a reflex neurosis. Three

weeks' antisypilitic treatment having produced no improvement, I removed the spur by Bosworth's method. Immediately thereafter the irritation in the throat and the cough ceased, and remained absent for two days. They then returned, but in a modified degree, gradually grew less, and finally disappeared shortly after the removal of my last dressing. No other treatment was employed, and the patient, who drank pretty freely, did not even change his mode of life. The first disappearance of the cough, etc., immediately after the operation, was probably due to the action of the cocaine used.

How are we to explain this relation between throat and nose? F. Frank has shown that excitation produced by a spur pressing on the lateral walls, and causing a passive hyperæmia there, is propagated by the ophthalmic nerve of Willis—nasal nerve—to the centres, whence it is reflected along the great sympathetic. The action of the vagus (centrifugal) must also be taken into account in our case, as must also the fact that the nerves of an alcoholic are likely to be hyperæsthetic; and, lastly, that a certain amount of the disease may have been due to his syphilis.

Another case was that of a man, aged 47, with nasal polypi, who came to me complaining of respiratory trouble, accesses of spasmodic dyspnœa, generally worst on going to bed; also of neuralgia and of watering of the eyes. I removed the polypi, and by that alone nearly cured all the symptoms. They did not completely disappear, however, till I had scraped away all the pedicles of the polypi. No other treatment was given.

Another case was sent me by a colleague who had tried all the drugs ordinarily used in such cases.

R. complained of being no longer fit for his work owing to difficulty of breathing. His attacks were often preceded by sneezing fits, came on during the day, and often lasted some hours. The condition of heart, of kidneys, of larynx could not be held responsible for these fits, but the inferior turbinals were hypertrophied, the posterior ends being immense. I reduced these, and the patient has not suffered since (six months), but has been able to carry on his old work.

These two cases of spasmodic dyspnœa are to be regarded as reflex neuroses, arising from irritation in the nose. That they were not due to nasal obstruction, causing secondary inflammation or irritation of lower parts of the respiratory tract, is proved by the facts:—

1. That removal of the polypi in the one did not cure the dyspnœa, but that scraping away the pedicles did; and
2. That in the other patient the hypertrophy did not cause complete nasal obstruction.

We are therefore justified in concluding that a foreign body (in the narrow sense of the term), or a similar condition due to a pathological state of the nasal fossæ, is capable of producing the above described respiratory troubles, which are true reflex neuroses. Other causes may produce them, but with these we need not at present trouble ourselves. I do not wish to rush to extremes in my conclusions, but I think that we must insist on affections of the nasal fossæ being considered important factors in the etiology of spasmodic affections of the larynx and lungs.

M. BLONDIAN. *Observations on Transfixions of the Turbinals.*

Definition.—Transfixion of the inferior turbinal consists in passing a galvano-cautery along the turbinal between the mucosa and the bone. Disorganization of the tissues is produced, and there results a notable diminution in volume of the turbinal.

Cases in which it should be employed.—The most suitable cases are those of chronic coryza, especially where there is hyperplasia—*i.e.*, where the increase in size is due to production of new elements.

On the other hand, cases of hypertrophy, properly so called (*i.e.*, where one finds an increase in the size of the anatomical elements themselves), are often successfully treated by irrigation, application of astringents, and by massage; caustic treatment not being always necessary.

Indications.—The mucosa of the free border of the inferior turbinal is very thick, especially when it is turgescient. This, therefore, is the point of election for our operation. As to the length of the cauterization, it is difficult to give any fixed rules, because noses vary in size. Thus, from the orifice of the nostril to the back of the pharynx varies from 10½ centimètres to 9½ centimètres. A medium-sized adult turbinal measures 5 centimètres, but this may be greatly increased by development of the posterior end. Experience must guide the operator.

Operation.—Antiseptic treatment having been carried out, if possible, for several days beforehand (and it should be continued for some days after the operation), the turbinal is anæsthetized. Cocaine is, so far, the best anæsthetic. For partial transfixion a small cautery may be used; for complete transfixion a lance-shaped cautery is best. Insinuate the cautery between the mucosa and the bone, at the inferior internal angle of the hypertrophied mass. It is introduced at a dull red heat, passed horizontally and straight back, so as to keep parallel to the side of the turbinal. When 7 or 8 centimètres of your instrument have entered the nasal fossa you stop; you have transfixed the turbinal. There is no hæmorrhage, no inconvenience for the patient, and the consequent retraction taking place along the whole mass removes the obstruction. A second transfixion would leave a canal of appreciable size. For example, in one I was able to pass a *nasal* probe right through and out at the posterior end, so that its point was visible by posterior rhinoscopic inspection.

Advantages.—A single application is usually sufficient, the mucous surface is not injured, synechiæ are never produced. Where the hyperplasia is so marked that even cocaine does not reduce the turbinal sufficiently to admit of the ordinary use of the cautery, transfixion is the only available method. On the other hand, if under cocaine the turbinal is so much reduced as to render transfixion difficult, or even to cause the cautery to break through the mucous membrane from within outwards, you obtain just the same results as from deep linear cauterization or igni-puncture. Even very marked polypoid degeneration of the posterior end of the turbinal usually shrivels up after one transfixion.

Complications.—The same general risks are run in transfixion as in ordinary cauterization, and the same precautions must be taken.

Some authors object (1) that transfixion may set up osteitis. It may do so, but very rarely; and when osteitis does occur, it does good rather than harm by preventing any chance of recurrence.

(2) The Eustachian tube may be injured by the cautery point. In ten cases taken at hazard I find the tube had been touched six times. The patients complained of a sensation of fulness in the corresponding ear, and of some whistling sounds, lasting a couple of days.

Lately I have had no trouble with the ears.

One thing is greatly to be desired for this operation, and that is a local anæsthetic which does not produce shrinking of the tissues.

M. CAPART said that hydrochlorate of eucain produced local anæsthesia of the mucous membranes without vascular constriction.

M. BAYER had tried this anæsthetic, but found that it possessed irritant properties, rendering its use disagreeable to the patient.

M. BROECKHAERT. *On Acute Lacunar Tonsillitis.*

Passing over the symptoms, which we all know, consider for a moment the infective nature of this malady. Simple acute lacunar tonsillitis may give rise to nephritis, to swelling of the glands of the neck, to peritonsillar phlegmon, to acute purulent otitis media, to articular affections, and even (Joal) to orchitis and ovaritis. Probably other affections may arise, but this collection is quite sufficient to demonstrate the infective nature of lacunar tonsillitis.

Meyer considers the streptococcus to be the germ of angina, and explains its comparatively frequent absence from cultures by the ease with which it is affected by slight changes in the nutrient media.

M. Sugg has examined fourteen of my cases (from both public and private practice). In twelve the streptococcus pyogenes was found, almost always in pure culture, rarely mixed with diplo- or staphylococcus: in one case diplococcus alone, and in one a pure cultivation of Loeffler's bacillus.

Meyer's investigations, and still more my own results, lead me to believe that lacunar tonsillitis is the local expression of a general disease, due to the penetration of streptococci into the organism through the tonsil, and is to be compared with angina with streptococcal patches (*l'angine à plaques streptococciques*) or even with scarlatinal angina.

Microscopic examination of sections of a tonsil removed during the height of the inflammation shows an excessive quantity of migratory leucocytes, both in the follicles and in the tissue proper of the tonsil. In and around the crypts the superficial epithelial cells are separated to some extent, and have undergone necrosis. These are the degenerating squamous cells, which one finds along with numbers of leucocytes on the surface of the tonsil and in the lacunæ. It is to be noted that the membranes are not formed of stratified masses of fibrine; but I believe that amongst the cellular elements there is an amorphous fibrinous substance, varying in quantity according to the intensity of the inflammation. The fibrinous network characteristic of diphtheria is always completely wanting. We have, therefore, to deal not only with an inflammation of the parenchyma of the tonsil, as Fränkel states, but with an inflammation affecting the mucous membrane as well.

M. BROECKHAERT. *Blister produced by an Application of Cocaine to the Skin.*

I was about to introduce some cocaine into the nose of a patient, an officer in the army, but he prevented me, saying that cocaine might produce dangerous results in his nose, as it caused vesication of his skin. I did not believe him, but to test his statement dropped a little cocaine solution on his forearm. Two days later he returned with a crop of small vesicles on the spot. I still remained sceptical, and to make the test more exact and certain I took two small vials, one of which contained distilled water, the other cocaine solution; and telling the patient that they contained cocaine of different strengths, I dropped a little from each on to the skin (the patient's eyes were shut while this was being done). The cocaine produced vesication, the distilled water produced no result. After some time the vesicles dried up, leaving a slightly pigmented scar. It should be noted that perchloride of mercury, carbolic acid, iodoform, and other more or less irritating substances produced no bad effects on this patient. The man is a strong, robust, but slightly gouty subject. The question suggests itself, what would have been the results had the cocaine been applied to the mucous membrane of the larynx instead of the skin of the arm?

M. GORIS had seen a somewhat similar irritant effect in the pharynx, produced by an application of cocaine there.

M. GEVAERT. *Statistics of Diphtheria Antitoxin.*

Soerensen, of Copenhagen, says in the "Therapeut. Monatshefte":—"My severe cases of diphtheria, whether treated with serum or by the ordinary methods, presented not only the same mortality but also the same course and duration. The sero-therapy, therefore, has had no beneficial action on the diphtheritic process in those cases which I have had under my care." Soerensen's views may change when he has to deal with a less severe epidemic.

My earliest experiences with antitoxin did not make me at all enthusiastic for it. In eight months—November, 1894, to June, 1895—I injected serum into five children suffering from severe diphtheria—that form of the disease in which systemic poisoning is marked from the first. All the children died. I also treated with serum twenty children with croup, in whom the toxic effects were very evident, and the rapid development of the local effects necessitated tracheotomy. Only five recovered: mortality, 75; whereas during eight previous years recoveries were 28 per cent.

During the last twelve months, however, my results have been very much better. Of twenty-four children so treated, nineteen of whom were in the dyspnoic stage of the disease, thirteen recovered: 52 per cent.; whereas in the eight previous years the mortalities per cent. were 70, 74, 68, 70, 72, 71, 70, 76.

The last figure, 76 per cent., refers to 1893, and shows that the dreadful epidemic of 1894-95 was already commencing, and further goes to prove that the poor results obtained in that year (1894-95) with antitoxin were

due not to any fault in the method, but to the malignant type of the epidemic.

M. GEVAERT. *Typical Cases of Ménière's Disease.*

True Ménière's disease, characterized by deafness of apoplectiform onset, vertigo, noises in the ears, and vomiting, is a rare disease.

A few months ago I saw a case. A night watchman in a factory fell down a stair, about thirty steps. Stunned at first, he gradually came to himself and tried to rise. At every effort he had an attack of vomiting and fell heavily to the ground. He lay there till the workers arrived in the morning, when he noticed that he heard none of the loud factory noises. The symptoms of vertigo and vomiting tormented him for three months, during which he was constantly confined to bed. Disturbance of equilibrium persisted for eight months; the subjective noises and the deafness are still as complete as they were the first day.

This case may be compared to that reported by Politzer, "*Arch. für Ohrenheilk.*," in which, at the autopsy, a fissure was found, starting in the occipital and passing through both petrous bones, and accompanied by a large extravasation of blood into the labyrinths.

The second case I have to report was even more interesting, as the deafness of apoplectiform onset, the vomiting, vertigo, and subjective noises came on without any traumatic cause. The patient was a well-built, very muscular ship captain, thirty-two years old, who had always enjoyed good health, denied syphilis, and only rarely drank to excess.

During the night of 12th and 13th December, in a fog at sea, he suddenly heard a noise in the right ear; this had lasted some minutes when violent giddiness came on, and he fell on the deck. He did not lose consciousness, tried to rise up, but fell again. He was carried to his bunk, and lay there till his arrival in port on the 15th. On recovering from the first shock he found he was completely deaf in the right ear. Supported by two men he came to me on 16th December. He stated that he had had attacks of vomiting on trying to sit up during the first four days. These had now ceased. Vertigo was constant; he felt as if he were always about to fall into a vast abyss at his side. Subjective sounds were as loud as at first, and were compared to a locomotive's whistle. Examination of the ear: Negative as far as membrane and Eustachian tube were concerned. No functional disturbance in the cerebral or spinal nerves.

Hearing power on right quite lost.

Tuning fork on vertex heard only in left.

Writing considerably altered and trembling.

Treatment.—Iodide and bromide of potass.; hypodermic injections of pilocarpin; rest.

After three weeks deafness remained unaltered; patient could then walk with the help of a stick, and his writing had returned to its normal condition.

M. EEMAN expressed his opinion that in typical cases (like No. 2) treatment should consist in daily injections (in the morning) of hydrochlorate of pilocarpin in doses increasing from $\frac{1}{2}$ centigramme to $1\frac{1}{2}$

centigrammes, and even more. If begun in the first or second week of the disease this treatment gave brilliant results; much better than Charcot's sulphate of quinine.

M. GORIS. *Chronic Sinusitis and the General Health.*

It has long been known that the respiratory apparatus may be affected from the nose, and in my opinion the digestive tract may also suffer, and in either case the general health will be injured.

I have recently had under observation three cases of empyema of the maxillary sinus and one of the sphenoidal sinus, in all of which there were profound alterations in the general condition. Without going into details I simply note that the appetite was almost gone, gastralgia came on after eating, the skin was of an earthy colour, and they all suffered from headaches. These conditions were due to absorption of septic matter, taking place probably partly in the stomach and partly in the affected sinus; stomachic absorption being most important in the sphenoidal cases, local absorption in the maxillary cases. Ordinary treatment for headache, etc., had been of no avail, but drainage of the affected cavities completely restored the patients to good health.

The only treatment recommended for the maxillary sinus is opening in front, free curettage, cauterization with chloride of zinc, and packing with iodoform gauze.

M. NOQUET. *Case of Fibro-Cartilaginous Cellular and Telangiectatic Tumour of the Septum Nasi.*

After giving a short account of bleeding tumours of the septum, and a more particular description of several similar to his own, and pointing out that whereas they form a fairly distinct clinical class, they vary greatly in their histology, M. Noquet described the following case:—

Madame X., aged sixty, complained of the right nasal fossa being obstructed for three or four weeks by a tumour which had suddenly appeared. The tumour sometimes projected beyond the naris, and several times had bled in an alarming manner. General condition of patient excellent. I found a rounded, smooth, greyish-blue tumour, lying about half a centimètre from the nasal orifice and completely blocking that side of the nose. On its surface were marks of previous hæmorrhages. It was about the size of a hazel nut, firm, movable, and arose from the cartilage of the septum by a cylindrical pedicle, about 3 millimètres long and 4 millimètres thick. The rest of the right fossa and all the left fossa normal. Under cocaine I cut through the pedicle with a galvano-caustic knife at a dull red heat. There was neither pain nor hæmorrhage. Four days later I cauterized the point where the pedicle had sprung. In three weeks cicatrization was complete, and there has been no recurrence (fifteen months).

M. Motz examined the tumour microscopically, and reported:—The tumour consists of two groups of different elements not separated by any precise line of demarcation. The central part is fibro-cartilaginous, the periphery cellular, except near the point of origin, where it remains fibro-cartilaginous. The epithelial covering is thin; ciliated cells are only

found here and there in groups of two and three. The blood-vessels are numerous and large all over, but specially so where the cellular element is predominant. There is a true cavernous tissue, chiefly venous. Around this cavernous zone and in the septa between the vessels one finds remains of old interstitial hæmorrhages. The fibro-cartilaginous part consists of fine connective tissue fibres forming a close network, or arranged in bundles of parallel fibres, containing in places small cartilaginous capsules. The cellular part consists of little round, oval, or much elongated cells, the round cells being about the size of white corpuscles. The tumour is therefore a hypertrophic growth, containing the tissue elements from which it originated. There is nothing to indicate the pathogenesis or etiology of the growth.

Tumours of this nature are less liable to cause severe hæmorrhage during operation than pure angiomas, recur less readily, and are less disposed to undergo malignant transformation. Nevertheless, one should always remember that simple tumours of the septum are always more liable to undergo malignant degeneration than those of other organs.

M. WAGNIER asked why M. Noquet did not prefer either electrolysis or the snare for the removal of the tumour.

M. NOQUET thought that with the galvano-caustic knife he could operate without causing any hæmorrhage, and in this he proved correct. Electrolysis would have taken longer, and would have been painful.

M. GOUGUENHEIM had removed several tumours of the septum, and had never seen consecutive hæmorrhage. He always used an iodoform gauze dressing. He had never seen recurrence of a malignant nature.

Arthur J. Hutchison (Trans.).

ABSTRACTS.

DIPHThERIA, &C.

Baginsky, Adolf.—*The Antitoxin Treatment of Diphtheria in the Kaiser and Kaiserin Friedrich Children's Hospital in Berlin and Dr. Winter's Observations thereon.* "Med. Record," Aug. 8, 1896.

IN the first part of this paper a long quotation is given from Dr. Winter's address (*vide JOURNAL OF LARYNGOLOGY*, Oct., 1896), in which he showed that the statistics of the antitoxin treatment of diphtheria in the Kaiser and Kaiserin Friedrich Children's Hospital in Berlin did not give a true statement of the real results, but were obtained by manipulating both figures and patients. The points in Dr. Winter's paper are then taken up and proved to be incorrect. It appears that Dr. Winter's criticism of the methods adopted in the hospital is based on observations made during one short visit. "His observations and all his conclusions are incorrect, and are based on such faulty observations as to amount 'almost to misrepresentations.'"

In the second part of his paper Dr. Baginsky points out :—(1) That the good results obtained with antitoxin are due to the antitoxin, and not, as has often been

asserted, to the mildness of the prevailing epidemic. (2) That larger numbers of mild cases have not been treated in order to swell the favourable statistics, but that, on the contrary, the number of cases admitted has been considerably lessened, and the cases taken have been of the severest kind, yet the mortality has been considerably decreased and the percentage of discharged cured considerably increased; e.g.:—

Jan.,	1896.	Number discharged	cured, 27 ; died, 2, =	6·89 per cent.
Feb.	,,	,,	,, 25 ,,	4, = 16 ,,
March	,,	,,	,, 25 ,,	3, = 10·71 ,,
April	,,	,,	,, 25 ,,	0, = 0 ,,
May	,,	,,	,, 25 ,,	3, = 10·71 ,,
June	,,	,,	,, 20 ,,	1, = 5 ,,

Thus percentage mortality for these six months is about 8·22, instead of about 40 to 50 per cent. as it used to be. (3) That he has never seen any bad effects from antitoxin, used either curatively or prophylactically, except in two cases, which he will report in detail later on. (4) That some so-called antitoxins are quite inert; he uses only Aronson's and Behring's. (5) That the complications arising in many cases of diphtheria are to be treated *sec. art.*, and not left to run their own course simply because antitoxin has been used.

A. J. Hutchison.

Bolton, B. Meade (Philadelphia).—*The Examination of Cultures from Cases of Suspected Diphtheria*. "The Med. and Surg. Reporter," June 27, 1896.

DURING the last seven months of 1895, 1421 primary and 1942 secondary cultures were examined, making a total of 3363 cultures.

Of the 1421 primary cultures, 1207 were made from the throats of persons showing clinical evidence of diphtheria, and 214 were made from the throats of healthy persons who had been exposed to infection. The diagnosis of diphtheria was made by the attending physician in 557 cases; in the remainder of the cases the physician either stated that the case was not diphtheria, or left the matter in doubt. In the 557 cases diagnosed as diphtheria, the bacteriological examination showed the presence of diphtheria bacilli in 507, or 90·2 per cent.

In 148 cases the physician stated that the disease was not diphtheria. The Klebs-Löffler bacillus was found in 40 of these cases, the clinical and bacteriological diagnosis agreeing consequently in 72·9 per cent. According to this, it would seem that in cases of angina which do not show sufficient evidence clinically to be called diphtheria, 27·1 per cent. have the same organism present that is usually found in clinically typical diphtheria. Those who call all anginae caused by Löffler's bacillus diphtheria would regard these as mild or atypical cases of the disease.

If the 557 cases in which the physicians pronounced the disease diphtheria be taken with the 148 that could not be called diphtheria clinically, it will be found that the clinical and the bacteriological diagnosis agree in 86·4 per cent.

Cultures were taken in 214 cases from the throats of persons who had been exposed to diphtheria, but who presented no clinical symptoms. Of these, 89, *i.e.*, 41·5 per cent., showed the presence of the Klebs-Löffler bacillus; 95, *i.e.*, 44·3 per cent., did not show the bacillus, and the others were unsatisfactory. It seems, accordingly, that more than one-third of persons more or less exposed get the bacilli in their throats. It would be interesting to know how many of these persons subsequently develop the clinical symptoms of the disease. In 50 of these cases it was possible to determine that the bacillus persisted, on an average, for 13·3 days.

In 460 cases presenting clinical symptoms of diphtheria, the length of time that the bacilli were present, dating from the appearance of the first symptom to dis-

appearance of the bacilli, could be determined. It was found that this varied from 7 to 96 days, the average being 28.3 days, irrespective of treatment.

A. B. Kelly.

Borthwick, T., and Irwin, H. O. (Adelaide).—*Preliminary Note on the Bacteriology and Antitoxin Treatment of Diphtheria.* "Australasian Medical Gazette," June 20, 1896.

A BACTERIOLOGICAL examination was made in fifty throat cases, twenty-five of which proved to be diphtheria.

Of these twenty-five, fourteen were treated with antitoxin, with two deaths. In these fatal cases the serum was first injected on the sixth and seventh day respectively. In other two cases, however, recovery followed when the injection was not made until the sixth day, and in a third case until the ninth day.

In eight of the cases a rash followed the injection, appearing usually about the ninth day. In seven of these it was urticarial, and lasted from two to six days. In the other cases it was scarlatiniform and transitory.

The diagnosis was made correctly in twelve of the twenty-five cases, in five it was doubtful, and in eight the disease was said to be tonsillitis.

By "post examinations," the throats were proved to be free of infection in from four to twenty-eight days.

In one case in which antitoxin was not used the patient was reinfected in four weeks, and in another in which it was used there was recurrence in six weeks.

A. B. Kelly.

Flick, Lawrence F. (Philadelphia).—*Calomel a Specific in Diphtheria.* "The Medical and Surgical Reporter," June 13, 1896.

IN this paper five cases are described, in all of which diphtheria was diagnosed by bacteriological examination. As a result of the author's observations, he regards calomel as a specific in this disease. He usually begins with a sixtieth of a grain (rubbed up with sugar, and placed dry on the tongue) every fifteen minutes, and increases or decreases the dose according to the constitutional effects. Nasal insufflations of calomel—either pure, or with two parts of sugar of milk—are also employed.

He attributes the good effects obtained by the drug to its local germicidal action. The frequent repetition of the dose keeps up a constant sterilization of the soil, and the small quantity prevents undue constitutional effects. In no other way can be explained the failure of the action of the calomel upon the membrane of the nose when given by the mouth alone, and its speedy action upon the nose when used by insufflation.

A. B. Kelly.

Hennig (Königsberg, Pr.).—*On the Practical Value of the Diphtheria Bacillus.* "Volkman's Klin. Vorträge," Nf. No. 157, 22 pp. Leipzig: Brettkopf & Hartel, 1896.

THE author has often observed that simple follicular anginas in which no diphtheria bacilli are found may be converted into grave septic anginas; that cases in which the bacilli are found may have a harmless course; that some cases of membrane on the tonsils and the velum are without the specific bacillus. Therefore the bacillus cannot be viewed as characteristic of diphtheria. Thirty-five cases were examined: in ten Loeffler's bacillus was found; in all the other cases other micro-organisms. Also specific paralyses followed sometimes cases in which no bacilli were found. Often virulent bacilli are found in the mouths of healthy persons. The author therefore believes that it is only practical to regard the clinical symptoms. Also the results of serum therapy are not at all convincing, and are not better than with

other treatment. With his simple treatment (ice, cleansing, aq. calcis, liq. ferri), the author had, in 1913 cases, 59 (equal to 3.08 per cent.) deaths.

Michael.

Kellock, T. H.—*Intubation versus Tracheotomy in Diphtheria.* "Lancet," Oct. 3, 1896.

CONSIDERS tracheotomy to be preferable to intubation, from a nursing point of view, in those cases where help cannot be obtained immediately during the first thirty-six hours, and when the obstruction in the first instance was severe. But he holds that the fact that, in the past, results of intubation instead of tracheotomy in diphtheria have been unsatisfactory is no argument against employing it in the future, now that in antitoxin serum we have such a valuable aid in the treatment of the disease itself. He, therefore, claims that when combined with the injection of antitoxin serum intubation has the following advantages over tracheotomy: (1) the operation can be performed more readily and with less assistance; (2) it does not need an anæsthetic; (3) the tube can be removed at an early date, leaving no wound, and no passage for the respired air except *per vias naturales*; (4) it does not require the patient being kept at any time in an artificially warmed and moistened atmosphere, and obviates the dangers to the lungs of unfiltered air being breathed straight in; and (5) it can be employed in cases where the parents or friends refuse leave for the "cutting operation." Tracheotomy has the advantage in those cases where there is a large amount of membrane below the larynx, and also in those cases mentioned above, where, from a nursing point of view, it is unsafe to leave a patient with an intubation tube in the larynx.

St Clair Thomson.

Loos (Graz).—*The Blood Serum of Healthy and Diphtheritic Children in its Relation to Diphtheria Toxin.* "Jahrbuch für Kinderheilk.," Band 42, Heft 3, 4.

THE author concludes:—Injections of heilserum increase the antitoxic power of the blood. This is proved by experiments in animals. The so-called prophylactic injections of blood serum do not produce an increase of the antitoxic power of the blood serum to any great extent. Natural diphtheria produces an increase of the antitoxic power after a longer period. During the disease, or shortly afterwards, examination of the blood serum shows no increase of the antitoxic power. In severe forms of the disease diphtheria toxin can be found in the blood by experiments on animals. A relation seems to exist between possibility of infection and the manner of its progress to the bulk of natural antitoxins. The natural antitoxic power lasts for a longer time. If the artificially-induced antitoxin has the same power it is not yet demonstrated.

Michael.

Martin, Sidney.—*The Serum Treatment of Diphtheria.* "Lancet," Oct. 17, 1896.

THE essentials of treatment are: (1) a large dose of antitoxic serum, reckoning in normal units; (2) which must be given as early as possible in the disease; and (3) which must be given in one dose, and not subdivided. In cases of faucial and pharyngeal diphtheria local treatment is also employed, usually consisting of a steam spray of bicarbonate of soda (20 grains to the ounce) every four hours, and a similar spray of corrosive sublimate (1 in 2000), also every four hours, so that the throat is sprayed every two hours. If there is a nasal discharge, a douche of bicarbonate of soda is used, and in laryngeal cases a warm spray of the same solution is employed. At one time it was attempted to do without the local applications of antiseptics to the throat, but several cases of glandular abscesses of the neck occurred, so that the local applications were begun again, and no more

abscesses have occurred. The strength of the serum used is about 4000 units in five centigrammes, and as this is a convenient amount to inject into a child it is more serviceable than when forty centigrammes have to be given in order to administer 4000 normal units. Martin, now, never gives a dose of less than 4000 units, and more frequently he gives 8000. No bad results have been observed from the use of the antitoxin. The beneficial results have not only been seen in the tables of mortality, but are also observed at the bedside. (1) It stops the growth of the membrane. In an ordinary pharyngeal case the effect is not usually seen for twelve or even twenty-four hours, and during this time the membrane may even spread; at the end of this period the spread of the membrane ceases. (2) In no instance has it been observed that a case which was simply pharyngeal on admission became laryngeal, and necessitated tracheotomy. (3) No cases have proved fatal, unless they were severe on admission. (4) A day or two after the injection, patients usually lose that earthy pallor which is so frequent in diphtheria, and their natural colour in part returns.

StClair Thomson.

Monti (Wien).—*Further Contributions on the Application of Heilserum in Diphtheria.* "Archiv für Kinderheilk.," Bd. 21, Heft 1-3.

THE author describes a fibrinous form, a mixed phlegmonous form, and a septic gangrenous form, of diphtheria. He then reports on 104 cases—of which 72 are fibrinous, 26 mixed, and 6 gangrenous—treated during 1895 with heilserum. Of the 72 cases of the first form, 6 died; of the 26 of the second form, 10 died; of the 6 of the third class, 5 died. The author recommends this form of treatment. In 35 of the cases remote effects of the serum were observed.

Michael.

Richards, Meredith.—*Post-Scarlatinal Diphtheria.* "Lancet," Sept. 26, 1896. DIPHTHERIA and post-scarlatinal diphtheria are both much less common in the provinces than in London. It holds that there is nothing special or peculiar in the etiology of post-scarlatinal diphtheria, but that it simply depends on the amount and virulence of the diphtheria existing among the population from which the patients are derived. In the author's hospital, when cases of diphtheria were excluded during a period of eighteen months, although there was an average of three hundred to three hundred and fifty scarlet fever patients under treatment, no case of post-scarlatinal diphtheria was met with. But once it became the custom to also admit cases of diphtheria to the hospital, other outbreaks occurred amongst the patients convalescing from scarlatina. The fact that diffusion of diphtheria takes place as a rule during convalescence, is explained by the greater personal contact which then occurs between patients.

StClair Thomson.

Schmidt and Pflanz (Graz).—*Relation of Human Milk to Diphtheria Toxin.* "Wiener Klin. Woch.," 1896, No. 42.

THE author concludes: The alexins which are in the blood of the puerpera also enter the milk, but they are not in so large a proportion in the milk as in the blood; therefore a much larger quantity of milk must be applied to produce the same effect. Babies rarely are affected with diphtheria. It is a question if the newborn are immunized by congenital antitoxin or by the use of antitoxic milk; probably the immunity is produced by both circumstances.

Michael.

Steigenberger.—*Collective Report on Serum Treatment of Diphtheria in Hungary.* "Pester Med. Chir. Presse," 1895, No. 18.

OF 279 cases of diphtheria, 214, equal to 76·7 per cent., were cured; 65, equal to 23·3 per cent., died. Of 175 cases treated exclusively with serum, 129, equal to 73·7 per cent., were cured; 46, equal to 26·3 per cent., died.

Michael.

Wassermann.—*Personal Idiosyncrasy and Prophylaxis against Diphtheria.* "Zeitschrift für Hygiene," Band 19.

THE author has mixed the blood of seventeen children and thirty-four adults with lethal doses of diphtheria toxin, and has injected it to guinea-pigs. He could prove that some persons have blood with strong antitoxic effects, whilst the serum of others has no antitoxic power at all. The difference in the existence of antitoxic substances in the blood causes the difference of liability to acquire diphtheria.

Michael.

Wassermann.—*Concentration of Diphtheria Antitoxins contained in the Milk of Immunized Animals.* "Zeitschrift für Hygiene," Band 18, 1894.

ONE HUNDRED AND FIFTY CENTIGRAMMES of the milk are mixed with thirty-three per cent. ammonium sulphate, filtered, dried, and dissolved in water. The solution thus obtained contains all the antitoxins of the milk.

Michael.

Wilbur, Cressy L.—*Age and Sex Incidence of Mortality in Michigan from Diphtheria and from Croup during Twenty-five Years, 1870-94: a Statistic Study.* "The Journal of the Amer. Med. Assoc.," Aug. 15, 1896.

THE object of this paper is not to support or condemn the antitoxin or any other method of treatment of diphtheria, but rather to give an impartial account of the prevalence of diphtheria in Michigan, and one as accurate as the available statistics would permit, and so help in advancing our knowledge of this disease. "The study will chiefly show (1) the availability of mortality statistics known to be imperfect in certain directions for use in certain other directions, as evidenced by the constancy and clearness of their testimony; (2) the characteristic differences in the age and sex incidence of diphtheria and croup, and, inferentially, the inexpediency of confusing their statistics under the term 'diphtheria and croup' from a statistic point of view; (3) the desirability of ascertaining the causes, and, so far as practicable, of preventing the increased relative mortality from diphtheria of female children on reaching the age of five years and upwards."

The paper is too elaborate to permit of a satisfactory abstract being made, specially as it contains several long tables (one graphic); at the same time it is a paper that anyone interested in the statistics of diphtheria will find worthy of study.

A. J. Hutchison.

Wolf Moritz.—*Accessory Cavities of the Nose in Diphtheria, Measles, and Scarlet Fever.* "Zeitsch. für Hygiene," Band 19, 1895.

IN twenty-two cases of diphtheria the author examined the accessory cavities of the nose. In all cases the Highmore antrum was affected, and in the greater number of cases the other accessory cavities also. The infection of the accessory cavities was in all cases bilateral. In twelve cases Loeffler's bacillus was found; in the rest streptococci. In five cases of measles and three of scarlet fever inflammation of the accessory cavities was found.

Michael.

MOUTH, &C.

Egger.—*Two Cases of Velo-Palatine Insufficiency.* "Ann. des Mal. de l'Oreille et du Lar.," April, 1896.

THIS condition was described by Lermoyez (Annals, March, 1892) as a congenita anomaly—an arrested development in which the soft palate, though normal in appearance, is apparently too short, leading to insufficiency of closure of the upper

pharyngeal cavity, the shortness being due to arrest of development of the osseous palate. The symptoms produced are defective pronunciation, nasal voice, and sometimes regurgitation of fluids through the nose. Lermoyez published twelve cases, Castex one, which, with the author's two cases, make fifteen. According to Lermoyez's measurements, the length of the osseous palate, from the incisor to the posterior limit, should be sixty-one millimètres: in the author's two cases it was respectively forty-eight and fifty-eight millimètres. The length of the normal soft palate to the base of the uvula should be twenty-four millimètres; in the author's two cases it was respectively twenty-eight and twenty-five millimètres. The width of the naso-pharynx should be normally fourteen millimètres; in the author's two cases it was respectively fifteen and twenty-two millimètres. As an additional proof of developmental arrest, in one of his cases there existed congenital bi-lateral inguinal hernia; the lobules of the ears were adherent. In the second case the presence of hammer toe, and the superior lateral incisors were absent in both, a sign of degeneration according to Fraenkel.

R. Norris Wolfenden.

Lacoarret.—*Post-Diphtheritic Pseudo-Hypertrophy of the Tonsils.* "Rev. de Laryn., d'Otol.," May 23, 1896.

THE author relates a case where the tonsils assumed an enormous volume without the least trace of inflammation, in a child four years of age attacked with diphtheria. They afterwards diminished in size until they appeared absolutely atrophied. He regards the pseudo-hypertrophy as of toxic nature, a kind of lymphadenoma provoked by the diphtheritic poison, and surgical intervention would be useless and possibly dangerous. With the elimination of the poison the tonsils renewed their usual size, and may be even completely atrophied.

R. Norris Wolfenden.

Meeray, P. M., and Walsh, J. J.—*Some Notes on the Bacteriology of Mumps.* "Med. Record," Sept. 26, 1896.

DURING an epidemic of mumps in the Camden Home for Friendless Children, the authors investigated, bacteriologically, the secretion obtained from Steno's duct, also the blood, and succeeded in isolating from both a diplococcus, which, they consider, may be regarded as the pathogenic organism. Ten test tubes were inoculated with the parotid secretion; six gave a mixed growth, but in all of them there was noted a small, white, slow-growing colony. This consisted of strepto and diplococcus. The diplococcus form was found certainly in eight of the tubes.

Eight tubes were inoculated with blood drawn from the lobe of the ear. Two gave entirely negative results, three gave pure cultures of the characteristic diplococci, and three gave a mixed result, the diplococci being found, but with them other cocci, specially a staphylococcus, probably the staphylococcus epidermis albus.

A. J. Hutchison.

Price, William Henry (Philadelphia).—*Jack-stone in the Œsophagus located by the Röntgen Ray.* "The Medical and Surgical Reporter," June 20, 1896.

A GIRL, aged two and a-half years, swallowed a jack-stone. Ten days later, when she came under the author's observation, she was fretful, suffering from general malaise, and losing flesh. She was able to take liquids only, and could swallow neither solid nor semi-solid food, solid food being regurgitated in a second or two.

From the ability to swallow liquids and not solids, and the prompt vomiting of the latter after ingestion, it seemed evident that the jack-stone was in the œsophagus. The case was therefore referred to the surgeons, who obtained a good skiagraph of the chest, which showed the stone to be in the œsophagus, nearly

opposite the second rib. Dr. J. William White afterwards operated successfully, and removed the stone. A. B. Kelly.

Schmidt (Dusseldorf).—*The Cicatricial Adhesions of the Pharynx and their Treatment.* Dusseldorf: Schneider, 1896.

THESE cicatrices are nearly all caused by syphilis, and in spite of the mobility of the soft palate they easily arise, because the cicatricial process begins on the sides, and thus itself decreases more and more the mobility of the central parts. The adhesions of the palate and naso-pharynx cause difficulties of speech, nasal obstruction, deterioration of hearing, smell, and taste. For operation the author applies cocaine narcosis, and separates by cutting the palate from the naso-pharyngeal wall. To prevent readhesion he inserts a tube, which is combined with a palate retractor. The author reports one case in which he has applied this method with a good result. In cases of adhesion of the oval part of the pharynx the author performs preliminary tracheotomy; then divides the adhesions and dilates with lacunar bougies. This method, also, he has applied in one case with excellent result. Michael.

Straight, H. S.—*Unresolved Amygdalitis.* "New York Med. Journ.," Sept. 26, 1896.

THIS paper is based on two cases in which a tonsillitis, apparently simple, refused to yield to ordinary treatment. In the first case, that of a boy aged ten years, a localized capillary bronchitis was found in the right apex; creosote was administered, and this speedily removed the tonsillar inflammation and more gradually the lung trouble. The second in a girl of twenty-one, a tonsil inflamed one month after partial excision; and it was only after some time, finding a slight catarrhal condition in the apices of the lungs and resorting to creosote treatment, that a cure was obtained. R. Lake.

NOSE, &c.

Ingraham, Charles W.—*Cocaine applied to the Mucous Membranes of the Nostrils a Specific for Nausea.* "American Med. Surg. Bull.," Aug. 15, 1896.

Two years ago the author accidentally discovered that the application of a two per cent. solution of cocaine to the nasal mucous membrane almost instantly, in the majority of cases, relieves nausea; and his experience since then shows it to be a very reliable remedy, if not a specific for nausea. He thinks, though he quotes no cases in support of his belief, that this treatment will prove of more than ordinary value in the obstinate vomiting of pregnancy, and in those morbid conditions of the stomach in which vomiting is not only constantly threatened, but in which it does great harm. To be effective the cocaine solution must be sprayed over the upper olfactory portion of the nose. Probably no effect would follow its application along the lower respiratory portion. It is also probable that a two per cent. solution will not suit every case, but that the strength of the solution will have to be varied. A. J. Hutchison.

Mermod.—*Meningo-Encephalitis, consecutive to Exploration of a Supposed Frontal Sinus.* "Ann. des Mal. de l'Oreille," April, 1896.

THE patient, a man aged thirty-six, had suffered for several years from pain at the root of the nose, frontal and occipital headache, with considerable nasal discharge.

The meatus was filled with muco-pus, of which it was difficult to discover the source. The wholly degenerated middle turbinateds were resected, large polypoid masses were removed, and the maxillary sinus was opened through the alveolus; the left sphenoidal sinus, which was filled with pus and large granulations, was treated by resection of the anterior wall. The right anterior and middle ethmoidal cells, when opened, also contained pus and large granulations. Four months afterwards the patient was much relieved, the nose was completely free and normal, and there was no trace of pus. He had, however, an intermittent aqueous secretion, and the headache was intense and exclusively frontal, especially on the right side, diminishing every time after an abundant evacuation of this clear liquid resembling water. The author first treated him for nasal hydrorrhœa without result. The case appeared to him to resemble those reported by Lichtwitz, in which the nasal secretion came from the frontal sinus and was caused by puncture through the nose. Electric illumination was negative, symptoms were very obscure, and catheterism failed because the canula seemed to be arrested at the entrance of the infundibulum, as if it terminated in a *cul de sac*. It was difficult to determine in favour of trephining the frontal, or artificial opening through the nasal fossæ, a method always repugnant to the author, and the sequelæ of this case will not encourage the employment of this, one of the most dangerous methods. Before introducing the trocar into the sinus as Schæffer does, Mermod wished to explore the upper region of the nasal fossæ with a thin curved probe, which was done.

After careful sterilization of the parts, it was carefully passed as close as possible behind the nasal bones. He remarked with surprise that the instrument entered a large cavity without meeting any bony resistance, which appeared to be a very extensive frontal sinus, and the probe having apparently traversed an opening from the nose into the sinus. The author judged it prudent to withdraw the probe after passing it seven and a-half centimètres from the entrance, which was followed by a great increase of his cephalalgia. An iodoform plug was introduced, and the patient put to bed. At the end of an hour the cephalalgia ceased, but during the evening the patient discharged a quantity of serous fluid. He returned to his occupation the next day. Eight days afterwards he was in his former condition. Before performing trepanation of the sinus, and in order to collect a little of the serous liquid for further examination, the author introduced a canula one millimètre in diameter through the same path taken previously, to a depth of six and a-half centimètres measured from the external nares, and supposed it to be in the sinus at the level of its floor. There flowed through the canula some grammes of a clear liquid-like water, and great pain obliged him to withdraw the instrument. Being assured that the second exploration had been performed even more cautiously than the first, the patient was allowed to return to his home. Twenty-four hours after the puncture he had undoubted signs of meningitis. He was sent into the hospital under Prof. Roux, who trephined him over the frontal region, when it was discovered that the frontal sinus was absolutely wanting, that region being filled by the frontal lobes. The dura mater was violet green, and on opening it the brain protruded into the wound as if pushed forward by considerable intercranial pressure. A probe introduced above penetrated easily into the nose, and a tube was introduced into the right nostril. Exploration did not discover the existence of any accessible intercerebral abscess. The flap was replaced and the wound closed. The patient died forty-eight hours after. The autopsy gave no explanation of the cephalalgia. As there was no sinus the liquid could only have been cerebral, collecting between the frontal lobe and the dura mater, and flowing intermittently. The brain presented no sign of traumatism, and it was into this space that the sound had penetrated. There were two holes at the base

of the skull, the first scarcely perceptible, three centimètres behind the nasal spine, through which, perhaps, fluid escaped; the second two and a-half millimètres behind the posterior surface of the osseous wall, eleven millimètres from the nasal spine, and at least a centimètre in front of the lamina cribrata. It would have been impossible to have explored more forwards, or that the operation could have been more prudently performed. If, with all precautions, exploration of the frontal sinus through the nose is able to lead to such a deplorable result, what can be said for operations such as Schaeffer's, where the opening of the sinus is performed by pushing a trocar from below upwards in the nose? Entering the frontal sinus through the nose except by the natural canal is always a dangerous proceeding, and where catheterism of the nasofrontal canal is impossible the author would not hesitate to make an exploratory trepanation. Schaeffer's method is far from fulfilling that elementary condition of surgery which enforces opening a diseased cavity as fully as possible, so that none of its parts escape inspection and radical treatment. To judge by the most recent publications (Kuhnt, Grünwald, Janssen) it is to be desired that the treatment of sinusitis should be surgical, and that timid intervention should be abandoned. The author has himself opened fifty frontal sinuses by resecting the anterior wall.

R. Norris Wolfenden.

Pearse, E. A. (Boston).—*A Case illustrating a New Method of Introducing a Plate for Restoring a Depressed Nose.* "Boston Medical and Surgical Journal," July 23, 1896.

IN this case the author introduced an aluminium plate, one inch long and five-eighths of an inch wide, trough shaped with rounded corners, through an incision made from within the nostrils, separating the skin from its attachments over the nasal bones and the nasal process of the frontal bone. He found no difficulty in slipping the plate into position. When fixed it rested on the nasal process of the frontal bone above, and the lower end of the nasal bones and cartilage below. The result was eminently satisfactory. The shape of the nose was restored, and the plate remained *in situ* without causing the slightest inconvenience.

St George Reid.

Porcher, W. P. (Charleston).—*The Treatment of Ozena, with a Case.* "Trans. South Carolina Med. Assoc.," April, 1896.

THE author seeks to draw forth some hints as to some curative form of treatment in atrophic rhinitis. He quotes authorities as to etiology, and gives, besides, all other accepted views as to possible causation, but says he has had but poor success in treating these cases. He quotes an illustrative case in a patient, aged 34, who had suffered for fifteen years. In this case Dr. Porcher opened the left ethmoidal and antral cavities with no result. He finally obtained partial relief by plugging with wads of wool soaked in pot. iod. ʒiiss, iodine grs. 40, glycerine ʒi.

R. Lake.

Scheppepegrell, W.—*The Use of Peroxide of Hydrogen in Diseases of the Nose, Throat, and Ear.* "Med. Record," Aug. 8, 1896.

PEROXIDE of hydrogen is very useful in cases of ozena (25 per cent. solution), applied either alone or after the usual douche of alkali or normal physiological salt solution. The nostrils are thus kept clean and the smell prevented. In purulent rhinitis a 5 per cent. solution should be used. In membranous rhinitis, whether due to Klebs-Loeffler bacilli or to micrococci, a 20 to 25 per cent. solution gives excellent results. In syphilitic necrosis its power of disinfecting and deodorizing renders it of great value. Again, in disease of the accessory cavities it is the most satisfactory cleansing and disinfecting agent we have.

In the throat it is useful in follicular and other forms of tonsillitis, and is a sheet anchor in diphtheria. Scheppegegrell uses antitoxin along with it, but attributes his good results largely to the H_2O_2 . He quotes one case in which, on failing to get an intubation tube to remain in the larynx, he injected with a laryngeal syringe a 75 per cent. solution of H_2O_2 . This so relieved the dyspnoea that intubation was no longer required. The injections were repeated every four hours, antitoxin was given, and the child recovered.

He has not noticed the irritant effects reported by some foreign writers. This may be due to the facts that he adds a little sod. bicarb., and that he varies the strength of the solution according to the requirements of the case. In the ear it is equally useful in all suppurative cases, specially those with fœtor.

A. J. Hutchison.

Swoboda (Wien).—*Etiology of Melæna*. "Wiener Klin. Woch.," 1896, No. 41.

THE author quotes four cases of melæna neonatorum. In the first case the child had gonorrhœal conjunctivitis, and a rhinitis also, caused by the gonococci. The child, at the age of ten days, had hæmorrhage from the nose and mouth. The *post-mortem* examination showed necrosis of the nasal bones and loss of substance in the mucous membrane of the nose, and subcutaneous hæmorrhages. The case must be viewed as an acquired hæmophilia by septicæmia, caused by the rhinitis. In the second case, that of a child affected with purulent rhinitis, violent nasal hæmorrhages arose, followed by melæna, with death. Here the *post-mortem* examination showed pachymeningitis vasculosa. This affection must also be regarded as an effect of the hæmorrhage. In two other cases which died from nasal bleeding the *post-mortem* examination showed membrane in the nose, and on bacteriological examination diphtheria bacilli were found in the membranes. Here the diphtheria is the indirect cause of death. The cases show the great importance of the examination of the naso-pharynx in cases of melæna. In a great number of cases it will be proved that there was not melæna vera, but melæna spuria.

Michael.

Tilley, Herbert.—*An Investigation of the Frontal Sinuses in One Hundred and Twenty Skulls from a Surgical Aspect, with Cases illustrating Methods of Treatment of Disease in this situation*. "Lancet," Sept. 26, 1896.

A THOROUGH knowledge of the anatomy of the sinuses is the first step necessary to explain the varying results which have been obtained with treatment, and also to enable one to adopt more uniformity in dealing with diseases in this situation. With regard to the frontal sinuses—with which this paper is only concerned—the author first notes the striking and extreme variation in their size. Thus, one sinus may be only large enough to contain an ordinary bean, whereas the other one will be ten times as large; there may be no sinuses at all; or the sinus may be absent on one side and quite well developed on the other. The septum is always complete, and hence reports where the two sinuses have been said to freely communicate should be received with reserve. The prominence of the superciliary ridges is no guide as to the extent or presence of the sinuses beneath them. The depth of the infundibulum from the anterior surface varies very much; it may be as deep as twenty-eight millimètres, and is much further back than is generally supposed. The direction and patency of the frontal nasal passage varies very much.

In view of these observations the author thinks that the best method of operating for frontal empyema is from the outside, by a central vertical incision, and maintains that the scar left by this incision is less noticeable than that left by an opening over the internal angular process. Schaeffer's method of puncturing the

frontal sinus from the nose is, from the above anatomical considerations, condemned as dangerous. The rule laid down by Hajek and others is insisted on, viz., that the maxillary antrum should be in every case explored before interfering surgically with the frontal sinus. Three cases of empyema of the frontal sinus are recorded.

StClair Thomson.

LARYNX.

Barton, Joshua Lindley.—*Diseases of the Trachea, Bronchi, and Lungs, treated by Intratracheal Injection.* "Med. Record," Aug. 1, 1896.

AFTER touching very briefly on the physiology of the trachea, and sketching the history of intratracheal injection as a method of treating diseases of the trachea, bronchi, and lungs since its introduction by Dr. Horace Green, of New York, Dr. Barton sums up his opinions and experience of the method as follows:—

This method of medication has many advantages, viz.:

1. The remedy is applied directly to the irritated mucous surface.
2. It immediately relieves the most distressing symptoms, adding at once to the comfort of the patient.
3. In a certain number of cases the antiseptic effect of the medicine is very pronounced, as shown by the longer interval between the febrile attacks and by their lessened intensity when they do occur.
4. The tracheal and bronchial mucous membrane rapidly absorbs the medication, so that we may expect a general as well as a local effect.
5. We avoid disturbing the patient's stomach with nauseating doses, and shattering his nervous system with opiates.
6. This method of alleviating the most distressing and annoying symptoms does not interfere in the slightest degree with any other line of general treatment which may be deemed advisable.
7. In cases characterized by an atrophic condition of the tracheal mucous membrane, or of pulmonary disease with cavitation leading to retention and decomposition of the secretions, intrabronchial injections will remove the disgusting fœtor of the breath consequent upon this condition.

A report is given of ten cases. The remedies injected were eucrophen and menthol, or guaiacol and menthol in solution in benzoïnol.

Of the cases reported, four were tubercular, and under treatment improved greatly; four were cases of laryngeal tracheitis, and all were cured—at least symptoms disappeared; one case of asthma improved, and one of bronchitis with asthma was cured.

A. J. Hutchison.

Bauer.—*Two Cases of Subcutaneous Emphysema during Intubation.* "Pester Med. Chir. Presse," 1895, No. 49.

OF eight hundred cases of intubation, emphysema was observed only in two. (1) In a four-year-old child, who coughed out the tube the next day, which was found obstructed by a thick pseudo-membrane. Next day emphysema arose on both sides of the neck and thorax. This, however, disappeared during the following days. (2) A four-year-old diphtheritic patient, who was intubated. Next day the tube and a great deal of membrane were coughed out. The next day emphysema of the skin of the whole body came on, but disappeared gradually in this case also.

Michael.

Brown, J. Price.—*Clergyman's Sore Throat.* "Amer. Med. Surg. Bulletin," Oct. 3, 1896.

By the term "clergyman's sore throat" the author seems to mean any throat trouble occurring in clergymen (one case of probable malignant disease of the larynx is included). He reports ten cases. All complained of hoarseness and more or less marked weakness of voice. Nasal obstruction was present in all but one case; and the removal of the obstruction, together with some simple spray to the throat, was the only treatment required in the majority. When a granular condition of pharynx and naso-pharynx was present, the treatment used was galvano-caustic. Elongated uvula and hypertrophied tonsils were present in one or two cases; they were cut. In one case an ulcer of the hyoid fossa was found and was treated with lactic acid. In only one out of the ten cases was the disease purely laryngeal. The diagnosis was not certain; it lay between chronic laryngitis and malignant disease. This was the only case in which the clergyman was unable to return to and continue his vocation. In one other case—viz., the one with ulceration of the hyoid fossa—the patient required to take special care of his throat; but all the rest were restored to full use of their voices. The term, "clergyman's sore throat," is misleading, and should be abolished.

A. J. Hutchison.

Bubere (Wien).—*Foreign Body in the Bronchus. Death from Perforation of the Pulmonary Artery.* "Wiener Med. Woch.," 1896, No. 35.

A PATIENT, thirty-eight years old, complained of hæmoptosis, and for some weeks he had had a cough with copious purulent expectoration. The physical examination showed a normal left lung, but the right side gave all the signs of infiltration. The sputum was fetid, and tubercle bacilli were not found. Some days later sudden death occurred from hæmoptosis. The *post-mortem* examination showed infiltration of the right lung, and in the right bronchus a piece of wood, which had perforated the bronchial wall and the wall of the pulmonary artery. It was remarkable that the patient did not suspect that a foreign body had entered his bronchus.

Michael.

Compaired.—*A Case of Influenzal Hemorrhagic Laryngitis.* "Ann. des Mal. de l'Oreille," May, 1896.

THE patient, a young girl, was feverish, absolutely aphonic, and suffered with repeated coughing attacks, with hæmoptosis. A pronounced hyperæmia of the pharyngo-laryngeal mucous membrane was accompanied by confluent hæmorrhagic points and large vascular patches on the vocal cord, by varicosities and hæmorrhagic points on the ventricular bands, the inter-arytenoid space, and arytenoid regions. Suitable treatment with sprays every three hours of aqueous solutions—antipyrine six per cent. and cocaine one per cent., with tannin and pastilles of menthol, cocaine and chloro-borate of soda—cured the patient eighteen days after the onset. This is probably the most extreme case of such an affection yet recorded.

R. Norris Wolfenden.

Cott, George F. (Buffalo, N. Y.).—*Erythema Nodosum Trachealis.* "The Med. and Surg. Rep.," Aug. 15, 1896.

THE author applies the above term to a condition which is not a disease *per se*, but a symptom of considerable importance when accompanying that particular lesion of the skin. Erythema nodosum trachealis may prove extremely dangerous to life if it remain unrecognized and the symptoms be treated lightly. This might readily occur, for there may be but slight evidence in the mouth, throat, and pharynx, and none at all in the trachea, as the following case proves:—

The author was hastily summoned to see a gentleman, aged thirty-five, who was suffocating. On his arrival the patient was found sitting in a chair breathing

with difficulty. On making a laryngoscopic examination, mild laryngitis was found, with slight cedema of the false cords, but not sufficient to hide the true cords entirely, which were red and somewhat thickened; the voice was quite clear. The subglottic tissue was plainly visible, but left sufficient room for respiration.

Steam inhalations and cocaine had been used for several hours without benefit. Intubation was then tried with various tubes, but an obstruction was always encountered deep down in the trachea. As the patient was rapidly getting worse, it was decided to perform tracheotomy. While attempting to lead him into another room he suddenly collapsed and became unconscious. He ceased to breathe almost as soon as the table was reached, and the pulse became weak. An incision was at once made down to the trachea regardless of vessels. After a tube had been introduced and the profuse bleeding attended to, he began to breathe feebly. In half an hour he got up and walked to his bed. He afterwards made an uninterrupted recovery.

The early history of this case is as follows:—

The patient, who had enjoyed previous good health with the exception of an attack of rheumatism five years before, first noticed an eruption on his legs, to which he paid little attention. Four days later he felt some soreness in the throat, and that night he had an attack of difficult breathing, which, however, passed off again. Two days later he had a second attack, which lasted four hours, when tracheotomy was performed.

The peculiar eruption noticed over the tibiae and forearms was diagnosed as erythema nodosum. It went through a typical course, producing successive crops, which no doubt was the case in the trachea also, the first obstruction disappearing and a second forming and nearly causing death.

A. B. Kelly.

Franklin, Melvin (Philadelphia).—*Intubation of the Larynx in Diphtheria, with Report of Twenty-five Cases.* "Med. News," July 25, 1896.

In the twenty-five cases there were only three deaths, two from paralysis of the heart and one from pneumonia; six of the cases suffered from nephritis; the tube was left in from two to five days, depending a great deal on the age of the patient. The author advises the use of a spray of 1-5000th solution of mercuric chloride in every case.

StGeorge Reid.

Galatti (Wien).—*Cicatricial Stricture after Intubation.* "Jahrb. für Kinderheilk.," Bd. 42, Heft 3 and 4.

Two cases of stricture were observed by the author in thirty-one intubations for diphtheria. (1) A child, aged one year and eight months, was intubated for eleven days; several trials to remove the tube failed, because the stenosis persisted. After the eleventh day the tube was removed, and five days later fresh symptoms of stenosis arose, increasing in severity, and, as tracheotomy was not allowed, the child died a few days later. The *post-mortem* examination showed "*stenosis laryngis post decubitus cum perichondritide cartilaginis cricoideae ex intubatione bronchitis purulenta, etc.*" (2) A girl, eighteen months old, ill with diphtheria, was treated with Behring's heilserum, but, becoming dyspnoic, was intubated. The child was intubated two hundred and thirteen hours in twelve days. Every trial to remove the tube failed, because the dyspnoea reappeared. As the dyspnoea did not disappear tracheotomy was performed. But a month later removal of the canula was impossible. Laryngo-fissure was next performed by Gersung. The operation showed the larynx to be closed by a cicatrix in the region of the cricoid cartilage. The cicatrix was removed and the new surface covered with transplanted

epidermis, and a double canula introduced. But in spite of repeated dilatation with various instruments the child left the hospital with a canula, and could not breathe by the mouth.

Michael.

Gibb, Joseph (Philadelphia).—*An Unusual Case of Papilloma of the Larynx.* "Philadelphia Polyclinic," Aug. 15, 1896.

THE growth occupied a position in the locality of the anterior commissure, and was about the size of a small cherry, with a broad base situated between the cords. The peculiarity of the case consisted in the unusual depth of the larynx, all the ordinary laryngeal forceps failing to reach the growth. By means, however, of a specially constructed pair of forceps, resembling Mackenzie's, but with the blades an inch longer and bent at a more acute angle, with antero-posterior movement, the tumour was successfully removed.

St George Reid.

Glover.—*The Acute Form of Primary Pseudo-Membranous Rhino-Laryngo-Bronchitis. Bacteriological Examination. Autopsy.* "Ann. des Mal. de l'Oreille," May, 1896.

A MINUTE and careful account of a case, a woman of sixty-seven, who died within seven days of the onset. The symptoms commenced with slight shivering, coryza, and bronchitis, resembling a gastric attack accompanied with bronchitis or an influenza of bronchial type. Cough, expectoration, aphonia, increased fever, painful respiration followed quickly. The larynx was covered with thick exudation, disseminated and in large blocks; pseudo-membrane occurred over the base of the tongue, tonsils, uvula, a large part of the soft palate, and anterior pillars of the fauces. This exudation was adherent, and could only be separated leaving the subjacent tissue bleeding and ulcerated; the mucous membrane was everywhere swollen and slightly red. The exudation, stained with gentian violet and Gram's method, revealed only staphylococci. These exudations increased, along with impediment to respiration, until death occurred. The urine was albuminous. A searching *post-mortem* examination was made. It was discovered that the retro-nasal cavity and posterior pituitary mucous membrane were covered with pseudo-membrane. The false membrane occupied the whole tracheo-bronchial tract as far as the third large division of the bronchi; the membrane at places was at least two millimètres thick. In spots where the membrane had disappeared the mucosa underneath was ulcerated. Serum cultures furnished only absolutely pure staphylococcus. Pathologically, the localization of the lesions to the upper respiratory and digestive tracts is an interesting point. Nothing was known as to the etiology, except that the patient had had an influenza a few days before the attack. The case is extremely interesting, as showing a purely staphylococcal invasion.

R. Norris Wolfenden.

Kemenyffy.—*Abscesses following Intubation.* "Pester Med. Chir. Presse," 1896, No. 7.

(1) THREE-YEAR-OLD child, intubated for diphtheria, improved rapidly under serum treatment. Some days later the stenosis reappeared, followed by pneumonia and subcutaneous emphysema. Death. The *post-mortem* examination revealed membranous laryngitis, decubitus of the trachea, and an abscess of the right lobe of the thyroid gland. (2) In a nine-months-old child, intubated for diphtheria, an abscess of the right half of the thyroid gland arose; this was incised, and cure resulted.

Michael.

Koschier (Wien).—*Combination of Tuberculosis and Scleroma in the Larynx.* "Wiener Klin. Woch.," 1896, No. 42.

A PATIENT, fifty-three years old, was healthy ten years ago; then he caught cold, became hoarse, and, later, dyspnoic. In 1894 examination showed infiltration of

both lungs and tubercle bacilli. The nose was filled with greenish secretion, and the naso-pharynx infiltrated; the epiglottis was thickened; the vocal bands were red and covered with granulations; the subcordal mucous membrane swollen and produced stenosis. The treatment was by Stoerk's laryngeal tubes. In 1895 a similar state was found, but complicated with ulcerations on the arytenoid cartilages. Ulceration is never found in cases of scleroma; therefore it was believed that the arytenoid affection was tuberculosis. The patient deteriorated; especially was dyspnoea increased, so that tracheotomy was performed, but the patient died the next day. The *post-mortem* examination of the larynx and pharynx confirmed the diagnosis of laryngeal and pharyngeal scleroma, complicated by tuberculosis of the arytenoid cartilages and of the lungs.

Michael.

Lohrstorfer, F.—*Laryngeal Papilloma in a Child; Repeated Intubation; Death.* "Med. Record," Oct. 10, 1896.

THE child, aged three, began to have some difficulty in breathing, which at first was attributed to asthma. This gradually grew worse, and when first seen by the author the child was in a condition of dyspnoea like that of acute diphtheritic stenosis. Examination was unsatisfactory; intubation was done, and had to be twice repeated. The third tube was left in three weeks, then removed under chloroform. Extreme dyspnoea at once came on, requiring tracheotomy. Next day the child died during an attack of dyspnoea.

Post-mortem.—There was found a broad-based papilloma entirely encircling the interior of the larynx at the level of the cords, and producing complete obstruction. In spite of the last tube having been worn for three weeks, there was not the slightest trace of irritation of larynx or trachea.

A. J. Hutchison.

Raugé, P. (Challes).—Abstract of Paper read at Congress of Surgery, Paris, Oct., 1896.

THIS series of clinical observations unites, etiologically, almost all the varieties of cervical tumours capable of causing compression of the recurrences and the laryngo-motor disturbances which are the mechanical result. From a pathogenic point, the ten personal observations which are embodied in this *mémoire* are thus divided: five cases of thyroid tumour, two of cervical adenopathy, one of cancer of the œsophagus, one of cervical caries, one of aneurism of the aorta. In nine cases the paralysis affected one vocal cord only, five times the left, and four the right; in one, both cords were affected in the case of cancer of the œsophagus. In six cases the vocal cord was in the cadaveric position (complete paralysis); more rarely, in complete adduction four times. In the single case of bilateral paralysis, the cords were both abducted. The symptoms usually accorded with the amount of deformity as seen by the laryngoscope. The cases in which the paralyzed cord occupied the cadaveric position, proved the more often to cause vocal disturbance, and respiratory troubles did not usually exist in cases of permanent adduction. The author observed, in conclusion, that the absence of disphonia in the last category is apt to fail to draw attention to the vocal apparatus, and therefore it is always advisable to hazard a laryngoscopic examination in such cases, and not to invariably suspect the larynx alone in dyspnoeic troubles.

R. Lake.

Terrier, Prof. Felix.—*Extirpation of the Larynx.* "Arch. Int. Lar., d'Otol., et de Rhin.," July-August.

THE author commences his lecture with a *résumé* of the history of the operation, and describes in detail the various classical methods employed, which it is unnecessary to repeat here. In dealing with the operation preceded by a preliminary tracheotomy,

he takes exception to the tampon canula as an instrument difficult of sterilization and causing great discomfort to the patient ; moreover, it allows of the accumulation of a considerable amount of blood in the space above it. He, therefore, considers it desirable to dispense with the preliminary tracheotomy, and proceeds to describe the operation as performed by Perrier in 1890, with the aid of Collins' canula, which fits like a cork into the truncated trachea. At the termination of the operation the tracheal orifice is stitched to the lower end of the vertical skin incision, the rest of which, with the exception of an opening at its upper end for the passage of an œsophageal tube, is immediately closed by suture. The author points out that, in spite of the fixation of the tracheal opening, some canula is necessary, as the mucous membrane swells after the operation and might embarrass respiration. The author considers it desirable to remove the whole of the cricoid, as the operation is thereby simplified, and as deglutition is apt to be difficult when the unyielding ring is preserved. He is not satisfied with any of the artificial larynges so far devised. The statistics collected by Schwartz (1886) and Pinçonnat (1890) are given, the immediate mortality in each case being about twelve per cent. for total extirpations. With the advance of antiseptic dressing, pulmonary complications arising during the first fifteen days fell from thirty-six per cent. to twelve per cent. between 1886 and 1890. The total mortality in both sets of figures is about forty-one per cent. for total, and thirty-six per cent. for partial, extirpation.

Ernest Waggett.

Turner, A. Jefferis (Brisbane).—*Foreign Body in the Air Passages*. "Australian Med. Gaz.," May 20, 1896.

AN infant, aged ten months, while crawling on the floor, was seized with a violent fit of coughing and choking, as if something had been swallowed. Nine hours later another violent choking fit set in suddenly. After the breathing improved the child was sent to the hospital.

The author saw the patient the same evening, and found her sleeping quietly and breathing easily, but with distinct inspiratory stridor. When disturbed, the child's cry was loud and quite unmuffled, showing that there was no swelling of the vocal cords : the stridor, however, became more distinct both with inspiration and expiration. There was no distress in breathing, no recession, and both sides of the chest expanded well and equally.

The infant was inverted, shaken, and slapped on the back, without producing any change in its condition. The trachea was therefore opened and a probe passed upwards into the larynx, where a hard, gritty, foreign body was at once encountered. Attempts to remove it with forceps failed. The wound consequently was enlarged, a small bougie passed from above through the glottis, and the foreign body pushed down to the wound, through which it was readily removed. It proved to be an irregularly-shaped piece of coal cinder, three-eighths of an inch in its longest axis, but very light, and thus capable of being drawn into the larynx by a sudden inspiration. The tracheotomy tube was removed on the second day, and the child was discharged from the hospital on the fourth day.

A. B. Kelly.

THYROID.

Branca and Menier.—*A Case of Epithelial Tumour of the Thyroid Gland, causing Death from Asphyxia*. "Ann. des Mal. de l'Oreille," May, 1896.

THE symptoms pointed to retro-sternal compression of the trachea, probably by an aberrant goitre, the patient having five years previously had a thyroidectomy.

Operation was considered to be useless. At the autopsy a hard mass was found around the upper portion of the trachea, evolving the œsophagus and cervical vessels on the right side, and infiltrating the trachea; as a certain surgical portion of the trachea was free from growth, a low tracheotomy could have been performed. Had this been done the patient might have been relieved from the intense suffering of progressive asphyxia which ended in death.

R. Norris Wolfenden.

Clark, Alfred.—*A Case of Absence of the Thymus Gland in an Infant.* "Lancet," Oct. 17, 1896.

THE child at birth was apparently well nourished and healthy, and continued to be so until six months old, in spite of being fed from a dirty bottle and otherwise neglected. About the sixth month swelling and coldness began in the hands and feet, and spread to the legs. The child was then found to be considerably swollen, and waxy in complexion; the heart and lung sounds were normal. There was no cyanosis; the fundi oculorum were normal; the bowels relaxed; the urine acid and without albumen. The swelling increased, and spread in spite of treatment, until the eyes were almost closed, and the limbs so distended with fluid as to feel like firmly stuffed cushions. Ecchymoses appeared in each supra-clavicular fossa, and the child died at the age of nine months. At the necropsy it was found that the thymus gland was entirely absent, and the position of the absent organ was not even marked by fibrous tissue. The case shows that absence of the thymus gland is compatible with fair health and normal development—at all events, for the first six months of life. There were no symptoms of acromegaly. The appetite remained good to the last.

St. Clair Thomson.

Koeppé (Giessen).—*Sudden Death of a Healthy Child.* "Münchener Med. Woch.," 1896, No. 39.

AFTER the sudden death of a child the *post-mortem* examination showed hypertrophy of the thymus gland. The author found forty cases in literature in which sudden death of healthy children was caused by this anomaly.

Michael.

Reinbach (Breslau).—*Results of Thymus Feeding in Goitre.* "Grenzgebiete von Med. und Chir.," Bd. 1, Heft 1.

IN thirty cases of goitre the thymus feeding was tried. The dose was twenty to thirty grammes of the gland three times a week, or tabloids of Burroughs, Wellcome, & Co. were used. In parenchymatous goitres in young persons good results are obtained, but in cases of myxœdema the thymus had no effect.

Michael.

E A R.

Alderton, H. A. (Brooklyn).—*The Operation of Mastoid Autotomy for the Cure of Obstinate Purulent Median Otitis, with Description and Presentation of the Author's Anthrotome.* "Arch. of Otol.," July, 1896.

THE author has a great belief in the efficacy of drainage of the mastoid antrum in the cases described, and he recommends the use of a guarded perforator for making an opening into the antrum from outside. As he very truly observes, the bone on the exterior has a strong tendency to become densely sclerosed and thickened, while, unfortunately, no such process takes place in the inner boundaries of the cavity, but, on the contrary, more usually a rarefaction, so that the contained matter is

likely to find its way towards the brain, lateral sinus, etc., rather than towards the exterior. The prolonged and energetic chiselling required in the typical operation is, of course, a regrettable necessity, and he has devised a drill with a guard or guide attached to it, the latter being introduced through the meatus (after detachment of the auricle) into the antrum through the aditus. In this way he perforates straight down into the antrum and on to the guide. A shouldered silver drainage tube is introduced into the opening, and thorough cleansing and healing solutions are introduced. The guide has an inner rod which can be projected through the aditus by means of a lever. [This instrument is probably the most ingenious attempt at the realization of an ideal which most operators must have conceived, and in the typical anatomical condition would probably be entirely satisfactory. At the same time most operators have met with cases in which the middle fossæ of the skull, or the groove for the lateral sinus, or both, project so much that the use of a drill thus worked in the dark is fraught with danger and uncertainty. It would be interesting to know on how many skulls, whether living or dead, the instrument has been employed.—ED.]

Dundas Grant.

Bacon, Gorham.—*A Case of Acute Otitis Media, followed by an Abscess in the Temporo-Sphenoidal Lobe. Operation. Death from Shock. Autopsy.* "Arch. of Otol.," July, 1896.

THE patient was a young man who had had no ear disease previous to the last eight weeks, when he became affected with acute suppuration in the left attic, the pus from which was evacuated by incision on several occasions with considerable relief. There was more or less persistent headache, and for the last three weeks loss of memory for objects and names of friends had been noted, but memory for events was good. His headache was severe, temperature 98·8, pulse full and slow, 56, respiration 16. Constipation was present. Brain abscess was suspected, but it was considered best to postpone exploration, the mastoid antrum being, however, opened without delay. This was found to contain granulations and a small amount of pus; no sinus in the roof of the middle ear could be discovered. The patient improved to some extent, but in about a week he had some mental disturbance, attacks of vomiting, and increased aphasia. The temperature had generally ranged from 97·8 to 99·6, but on the day when it was decided to operate the temperature was 100·6. A trephine hole was made with its centre 2·5 centimètres above the external auditory canal. An aspirating needle was introduced in different directions, but without result. The opening was then enlarged, and the needle was introduced in a direction backwards, inwards, and upwards, for three centimètres, when pus escaped. There was a fairly large abscess cavity without lining membrane. Half an ounce of pus was evacuated. About two hours later the patient died, apparently from shock. On a *post-mortem* examination, the outer third of the superior surface of the left petrous bone was discoloured, and presented a small opening communicating with the attic. Over this there was an aperture communicating with the brain, and an abscess in the posterior half of the third temporo-sphenoidal convolution, while the brain substance beneath the cortex behind the whole of the lower part of the temporo-sphenoidal lobe was found softened and streaked with blood. A reddish mass lying in the centre proved to be the capsule of an abscess which had probably ruptured. The writer points out the advisability in such cases of exposing the roof of the tympanum from the middle fossa at the time of the antral operation.

Dundas Grant.

Cheatle, A. H. (London).—*The "Mastoid" Antrum a Part of the Middle Ear.* MR. CHEATLE pleads once more for the abolition of the term "mastoid" antrum, contending that the division of the petro-mastoid bone into the petrous and

the mastoid is (as all will agree with him) perfectly artificial. He advises the adoption of the excellent term, "tympanic antrum." [The abstractor recommended this in a comment on a paper in the "Lancet" of Dec. 3, 1892, in which Mr. Cheatle suggested the term "tympanic receptaculum" (*vide JOURNAL OF LARYNGOLOGY*, 1893, p. 105).] Mr. Cheatle illustrates his paper by some sketches, which support his contention very strongly. *Dundas Grant.*

Clark, L. Pierce.—*Prognosis of Insanity complicated by Hematoma Aurum.* "American Med. Surg. Bull.," Aug. 22, 1896.

A SHORT paper, first showing that this complication of insanity almost always implies a very grave prognosis. In the literature of the subject the author could find only five authentic cases in which recovery from insanity occurred when hæmatoma aurum was present. He then reports one case in which non-traumatic hæmatoma occurred in a man suffering from acute melancholia. He gradually recovered, and remained well five years later. *A. J. Hutchison.*

Denker, Alfred (Hagen).—*A Case of Otitic Sinus-Phlebitis and Metastatic Purulent Pleurisy cured by Operation.* "Monats. für Ohrenheilk.," Sept., 1896.

IN this case there had been an old-standing otorrhœa, which suddenly ceased, and the cessation was followed by rise of temperature, mental obfuscation, inactivity of the pupils, headache, and mastoid tenderness. The mastoid was opened, and was found to be deeply sclerosed, with a small antrum containing cheesy pus and granulation tissue. A careful search revealed an opening leading backwards from the cavity. Suspecting that infection of the sigmoid sinus might be the cause of the constitutional disturbance, this was exposed for an inch of its length, and found to be of a greyish colour, thickened, and non-pulsating. It was then slit up, and found to contain a firm, cheesy clot. "In order not to loosen any portion of it" the operator introduced with care a strip of iodoform gauze, and applied an antiseptic dressing. The patient improved for several days, when cough came on, and dulness on percussion was elicited, without marked bronchial breathing, extending from the spine of the left scapula downwards. The sensorium was clear, but the temperature rose to nearly 104° F., and puncture of the pleura confirmed the diagnosis of empyema. Resection of the sixth rib in the anterior axillary line permitted of the evacuation of more than a litre of fetid pus. With slight fluctuations speedy recovery followed. The writer adds this to the other eighty cases already published, of which about one-half recovered.

Dundas Grant.

Donaldson, E.—*Movement of the Membrana Tympani with Respiration.* "Lancet," Oct. 10, 1896.

FINDING no reference to this subject in the text books the following case is recorded:—A woman, aged twenty-five years, complained that her left ear had now and then during two months felt as if stuffed with cotton-wool. Her voice seemed not to "escape through her left ear" when the full feeling was present. She could hear a watch at forty inches. There was no tinnitus. On examination a small part of the membrana tympani, in the region of Wilde's spot, moved in and out, keeping time with respiration. The movement occurred only during nasal respiration, and stopped when she breathed through the mouth. Eleven days after her first visit she said that the sensation as if her ear was "stuffed" was gone for the present, and on examination no movement of the membrane was found during respiration. From this it is concluded that (1) the whole of the membrana tympani, or a part of it, may move during respiration through the nose; (2) the

movement may be present one day and absent the next; and (3) it occurs when the Eustachian tube is unduly open, patulous, and when the membrane is in part or wholly atrophic and flaccid.

StClair Thomson.

Fridenbergh, Percy H. (New York).—*Hygienic Principles in the Prevention of Ear Disease.* "Med. News," Aug. 8, 1896.

THE article first refers to the destruction of micro-organisms, pathogenic and otherwise, in the healthy naso-pharynx, by phagocytosis, mutual antagonism, etc., and goes on to point out that the commonest path of aural infection is through the Eustachian tube opening into the naso-pharynx, and insists on proper antisepsis of the mouth, throat, etc., by means of gargles, mouth washes, sprays, etc., especially when any morbid change is taking place. The author draws attention to the importance of removing any possible nidus for pathogenic organisms, such as diseased tonsils, decayed teeth, etc., and concludes by enumerating the various applications he has found of service in the treatment of aural inflammations.

StGeorge Reid.

Kenefick, Thos. A.—*Ménière's Disease.* "Med. Record," July 25, 1896.

MR. J., about forty-five years of age, robust and healthy in appearance, by profession an architect, had lived a regular, sober, but very hard working life. No history of syphilis or other disease. He was awakened up one night by an attack of violent vomiting, accompanied by persistent giddiness, and by noises and marked deafness in the right ear. Examined next morning he was found in excellent general condition, right membrana tympani slightly congested. Vomiting and dizziness continued some hours, then ceased, but were renewed by every attempt to sit up or to turn. Finally vomiting yielded to small doses of ipecac., but deafness and giddiness persisted. There were also present several symptoms of perverted vision. He saw by his bedside the slanting roof of a conservatory on which sat a glazier rapidly fitting in panes of glass, which as rapidly fell through. In the afternoon this scene was replaced by the figure of a woman dressed in brilliant red. At first small, the figure gradually increased to about one hundred feet high, and was surrounded by multitudes of active little mice. These disturbances vanished towards evening, and but for the dizziness patient seemed quite comfortable. The vomiting ceased. In about two weeks the deafness and giddiness began to improve, and in six weeks patient was able, with the help of a friend, to reach his office. Treatment at first was by large doses of quinine, and later iodide and bromide of potash, but with no marked results. Galvanism seemed to be beneficial. Recovery was complete.

A. J. Hutchison.

Lake, R. (London).—*A New Method of dealing with the External Meatus in Operations on the Mastoid.* "Arch. of Otol.," July, 1896.

THE chief novelty in this method is the ingenious idea of removing the cartilage of the posterior half of the cylinder of the meatus, thereby depriving it of its resilience, and preserving the skin of that half of the meatus with which to make a flap to cover the floor of the artificial cavity.

Dundas Grant.

Lannois.—*Acute Catarrhal Median Otitis and Microbes.* "Ann. des Mal. de l'Oreille," June, 1896.

WHILE many observers have discovered various micro-organisms in secretion of acute catarrhal otitis, Scheibe, of Munich, has made numerous bacteriological studies upon median otitis, with the result that he found no micro-organisms present. Lannois has thought, in these contradictions, that new researches would be of interest. He has made cultures twelve times with the liquid drawn from

six patients suffering from catarrhal median otitis. Five times the cultures were fertile, and seven times sterile. How can these contradictory results be explained? If the middle ear encloses microbes in its normal condition, their occurrence in secretions of catarrhal otitis would lose all importance. He refers to his previous work, which shows that the middle ear is a closed cavity and aseptic. In an acute coryza or an angina, pathogenic microbes enter the tympanum in too great a number to be destroyed. They determine an inflammation with exudation, and the more easily as the same bacterial invasion has irritated the Eustachian tube, and led to its more or less complete obstruction. There is a veritable otitis, and not merely a simple effusion *ex vacuo*, and if a culture is made after paracentesis it is sure to reveal various staphylococci, streptococci, etc. But if the organism is resistant, if the bactericidal action of the secretion is exerted on the invading microbes, or if these are but little active, the pathogenic agents disappear after a few days, and cultures remain sterile. This view is supported by the author's experiments, cultures being positive when the paracentesis was made at the commencement of the affection, and negative at a later period; and it also explains why, when the catarrhal effusion is not absorbed, it may persist without change for weeks or months; why patients may be catheterized with impunity, even in the vitiated air of consultation rooms; and why paracentesis, even without proper antiseptic precaution, so seldom leads to purulent transformation. We cannot establish any pathogenic difference between acute catarrhal and acute purulent otitis; the same microbes determine both conditions, and it is merely a question of resistance of the organism.

R. Norris Wolfenden.

Lannois.—*The Normal Middle Ear and Microbes.* "Ann. des Mal. de l'Oreille et du Lar.," May, 1896.

THE author has made bacteriological experiments upon dogs and rabbits. These naturally cannot be conducted upon the living human subject, and upon the cadaver would be useless. The experiments were conducted with every possible precaution, and six tubes inoculated from two dogs gave no cultures. Eleven similar tubes inoculated from rabbits remained absolutely sterile. There are, therefore, no microbes in the middle ear, and analogy would lead to the same conclusion with regard to the human subject. The reasons for this asepsis are found in the action of the nasal cavities in arresting and destroying microbes; possibly the tympanic mucous membrane enjoys the same properties.

R. Norris Wolfenden.

Lautenbach, Louis J. (Philadelphia).—*Phono and Pneumo-Massage in Suppurative Disease of the Ear.* "The Med. and Surg. Reporter," July 18, 1896.

IN otorrhœa, wet cleansing serves to wash out most of the discharge, but allows some, together with the residual liquid, to remain. This diluted discharge is probably more irritating than the original, and excites increased secretion and inflammatory action. Dry cleansing, as usually pursued, can never remove all the suppuration, as the middle-ear cavity cannot be thoroughly reached in this manner.

To remove these discharges the author uses his pneumo-massage instruments (which are not described here), together with wet or dry cleansing. He first treats the ear according to the present methods, and when he considers it fairly clean he uses an exhaust apparatus, with a pressure of from two ounces to four pounds per square inch, for from three to ten minutes, employing about 300 exhausts per minute. He then thoroughly cleanses the ear with cotton, and if suspicious of suppuration being still present he again applies the exhaust pump. After thus cleansing the ear he uses drying and stimulating preparations in the usual manner. Often in simple cases, after cleansing the ear, he lightly plugs with cotton, and uses no other treatment.

By this massage method he often succeeds in reducing the infiltration and inflammation, and, when used daily, in preventing the formation of bands and adhesions. Further, the procedure may be employed to break up ankyloses, stretch and cause absorption of bands, rupture adhesions, reduce thickenings and growths of the mucous membrane, and relieve pressure on the internal ear.

Phono-massage is used to stimulate the internal ear when from either pressure or disease its nerve endings are unresponsive.

A. B. Kelly.

Milligan, W. (Manchester).—*Two Cases of Sarcoma of the Middle Ear.* "Arch. of Otol.," July, 1896.

THE first case was that of a female, aged sixty-three, in whose external meatus there was a fleshy-looking growth of uncertain duration, with frequent attacks of spontaneous hæmorrhage. There was extensive caries of the surrounding bone, facial paralysis, and absence of sense of taste on the side of the tongue. A small portion was removed for microscopical examination, which showed it to be an angio-sarcoma. There was considerable hæmorrhage, only arrested by means of the galvano-cautery point. The second case was that of a girl, aged eighteen, who had from earliest infancy suffered from suppuration from the middle ear. The meatus was blocked by a fleshy-looking substance, there was deep-seated caries, and the tissues over the mastoid process and in front of the meatus were puffy and œdematous. The removal of as much of the growth as possible was carried out under chloroform after detachment of the auricle, but it was found to arise from the inner wall of the tympanum, and recurrence, as was expected, subsequently took place. The growth was a fairly vascular myxo-sarcoma. Excellent microscopic illustrations are appended.

Dundas Grant.

Milligan, W. (Manchester).—*A Case of Temporo-Sphenoidal Abscess secondary to Acute Left-sided Suppurative Middle Ear Disease; Operation; Acute Hernia Cerebri; Death.* "Arch. of Otol.," July, 1896.

DR. MILLIGAN was called in after treatment had been carried out for three months in vain, for the relief of pain following an acute median otitis. He found in addition to the pain great mental apathy, marked sensory and slight motor aphasia, ptosis, left-sided mydriasis, and facial paralysis, temperature 98·8° F., and pulse 66. Trephining was performed, and a temporo-sphenoidal abscess found and evacuated. The patient gradually improved for about six weeks, when hernia cerebri appeared, and, in spite of exploration, death took place from basal meningitis. There was no erosion of the tegmen, and no suppuration in the mastoid cavities. Extension appears to have been by the lymphatics.

Dundas Grant.

Ostmann (Marburg).—*On Simulation of Deafness and Failure to Recognize Diseased Condition of the Hearing Apparatus.* "Monats. für Ohrenheilk.," Sept., 1896.

THE writer considers that there is no "instrument" of value in the diagnosis of simulated deafness to compare with a complete knowledge of diseased conditions of the hearing organs, and that without this all the recognized classical methods may lead to error and injustice. In his experience (twelve years) as a military surgeon he has found genuine simulation to be extremely rare. He points out the danger of being misled into a diagnosis of simulation if our tests give an unexpected or unusual result. Thus, he quotes the case of a man who received a blow rupturing the membrane, and as the result of injudicious syringing had a suppurative otitis. In this case the patient asserted that the vibratory tuning-fork on the vertex was heard in the uninjured ear. This unexpected result of Weber's test

might be ascribed by the examiner to intentional misstatement on the part of the patient, especially if the latter was a soldier and the examiner was suspicious of malingering. In reality, in the case quoted, the inflammatory disturbance had affected the internal ear, and the further use of his otological knowledge enabled the writer to verify the truthfulness of the man's statements. Again he warns us against confusing intentional simulation and a form of unintentional simulation, as when an individual with traumatic rupture of the membrane has the conviction that with such an injury he cannot and never will be able to hear. (We might almost describe this as auto-suggestion). To put the patient down as a malingerer, to be punished instead of being encouraged by the cheering assurances of eventual restoration, would be unjust and erroneous. The writer insists on the danger of a bias towards the diagnosis of simulation, and on the need for knowledge of mankind, and experience. A minute acquaintance with otological diagnosis ranks above all other means for the detection of simulation.

Dundas Grant.

Pooley, Thomas R.—*On the Value of the Ophthalmoscope as an Aid to the Diagnosis of Cerebral Disease in Purulent Affections of the Middle Ear.* "Med. Record," Aug. 15, 1896.

THIS paper commences with the quotation of three cases reported by Dr. Andrews in 1883, in which the great value of the ophthalmoscope as an aid to diagnosis in such cases was demonstrated. The summaries of these three cases are :

1. Otitis med. purul. chronic. ; abscess of middle lobe of cerebrum ; double optic neuritis ; death.
2. Otitis med. purul. chronic. ; optic neuritis ; phlebitis of right lateral sinus ; meningitis of convexity ; death.
3. Otitis med. purul. chronic. ; meningitis ; optic neuritis ; recovery.

Next is quoted the report of a case by J. Kipp. Otitis med. purul. *acuta* ; double optic neuritis ; no swelling or spontaneous pain in mastoid ; opening of mastoid cells by Schwartz's method ; rapid subsidence of optic neuritis ; recovery.

The author then reports his own case. Patient aged twelve ; had had otorrhœa for years, Wilde's incision having been performed six years ago. On admission, pain and swelling over mastoid ; slight discharge of pus from external canal ; high temperature. Wilde's incision performed : temperature fell and pain disappeared. Next day, rise of temperature and return of pain. Schwartz's mastoid operation performed : pus, granulations, etc., removed ; a considerable amount of dura exposed. As the discharge from the external auditory canal was slight, the membrana tympani was perforated ; this was followed by the onset of chills, with high temperature, 104° 5' F. Later came severe pains in head, contracted pupils, choked disc (left side). Still later complete blindness of right eye ; ophthalmoscopic examination at first *nil*, but afterwards slight venous hyperemia (right) and violent choked disc (left). Two days thereafter paralysis of right side ; coma lasting about twenty-four hours ; death. The autopsy revealed abscess in left occipital lobe, extensive sinus thrombosis of the left side, and widespread stinking purulent meningitis.

The author thinks that otologists do not pay sufficient attention to the eyes. The condition of the fundus often confirms a diagnosis of intracranial disease arrived at from other symptoms, and sometimes is the only symptom. If optic neuritis is found, the diagnosis of extension to the brain is certain, no matter whether other evidence exists or not. In the same way, if, after operation, the optic neuritis diminishes and disappears, one knows that the intracranial complication is doing likewise. Unfortunately optic neuritis aids neither in locating the intracranial disease nor in diagnosing its nature ; it may be present in abscess of cerebrum, in

abscess of cerebellum, in meningitis, and in thrombosis. Marked optic neuritis alone occurring in a case of chronic otorrhœa is sufficient indication for opening the mastoid; and even when there is only slight œdema of the optic disc, the author thinks, with Andrews, that the mastoid operation should be performed. The existence of optic neuritis as an indication for an exploratory opening into the cranial cavity can be considered only in connection with other symptoms. "So far as it goes, however, it serves to make the presence of intracranial disease "more certain."

A. J. Hutchison.

REVIEWS.

Schrötter.—*Vorlesungen über die Krankheiten der Luftröhre.* ("Lectures on the Diseases of the Trachea.") By Prof. SCHRÖTTER, of Vienna. With fifty-three illustrations. 1896. Wilhelm Braumüller, Vienna and Leipzig.

THIS book, consisting of 195 pages, contains seventeen lectures on the diseases of the trachea and bronchi. It forms the second volume of Prof. Schrötter's lectures, the first being his well-known systematic work on the diseases of the larynx, of which the second edition appeared in 1893.

The first lecture deals with the anatomy and the known congenital malformations of the trachea; the second describes minutely the best mode of performing tracheoscopy, very much as has been done by Türk and by Morell Mackenzie, though, perhaps, less frequently put into intentional practice by laryngoscopists in general. The perusal of this work may lead to a beneficial change in this respect. Great stress is laid on the necessity in all cases for the straightening of the spinal column during the examination, and, in some, for rotation of the head on the trunk through an angle of 90 degrees. The writer gives a reserved opinion with regard to Kirstein's method of autoscopia, of which he recommends further use, while strongly convinced, as Kirstein himself frankly admits, that it can never take the place of the reflected light as usually employed. The various diseased conditions which the trachea presents are then individually described, including anæmia, hyperæmia, hæmorrhage, acute inflammation, chronic inflammation (with occasional distension of glands or of atrophied portions of the tracheal wall); also the various inflammations accompanying specific infective diseases—tuberculosis, lupus, leprosy, scleroma, syphilis, and others. The description of the bridges of mucous membrane left over the undermining syphilitic ulcers, and the symptoms produced by the entanglement of collections of secretion under these, are graphically described. Injuries and foreign bodies form the subject of another lecture. Prominence is given to the reduction in the mortality of cases of foreign bodies in the trachea from 41·2 per cent. before 1886 to 30 per cent. after this date, namely, the time of the introduction of laryngoscopy.

A very large amount of space (pages 96 to 145) is naturally devoted to the subject of tracheal stenosis, which is treated of in three lectures. The

cases of stenosis are classified, according as they arise from without, from disease of the walls, or from intra-tracheal conditions. The mechanism of tracheal stenosis as produced by bronchoceles, both from direct pressure and from atrophy of the cartilaginous rings, is interestingly described. Curiously enough, in this very exhaustive list dislocation of the sternal end of the clavicle backwards is omitted, a somewhat sensational example of which is recorded in all our English classical works on general surgery. In this article (page 107) some of the difficulties connected with the removal of the canula after tracheotomy are described; in particular, granulations and decubital ulcerations. Symptoms of tracheal stenosis form a chapter of the utmost importance, which no writer on or teacher of practical medicine should omit to read. The description of the sound characteristic of tracheal stenosis is admirably given, though it seems to us that it is not so well known to general practitioners as it ought to be. Morell Mackenzie states that it is so characteristic that when once heard it can never be forgotten, and cites the instance of a nurse who was able to diagnose the condition, through having once had such a case under her observation. Prof. Schrötter expresses the opinion (page 116) that Gerhardt's statement that excursions of the larynx do not take place in pure tracheal stenosis, although correct in many instances, is by no means so in all. Furthermore he finds the same writer's statement that in tracheal stenosis the head is kept inclining backwards also unsupported by his experience. Further details and illustrations of the tracheoscopic image in such cases are given. Transillumination is recommended in thin necks, and the possibility of great assistance from the Röntgen method of photography is also freely admitted. In the light of the demonstration given by Dr. Macintyre before the British Laryngological Association, and detailed at the time in this journal, our readers will be quite prepared to see this hope fulfilled. To these methods Prof. Schrötter adds that of probing by means of a suitably curved sound, and also by a plastic (*Modellir bougie*) coated at its lower extremity with a combination of wax and turpentine. This is pushed down into the stricture, and a cast of its interior is thus obtained, which is fixed by its being plunged into cold water. Naturally, this method is not intended for the million, and even the specialist will introduce it into his practice with some sense of responsibility. Prof. Schrötter gives examples of its value, and others will have to keep it before their minds.

There is an admirable chapter on new growths in the trachea, and a description of the instruments by which certain of them may be removed, either through the natural opening or through a tracheotomy wound.

The book is full of practical hints, and generous appreciation is expressed of the works of others, their results being criticized temperately, and the opinions of their value, though sometimes not so dogmatic as many would wish, giving evidence of an anxious desire to elicit the truth rather than to establish preconceived principles. To Dr. Luc is accorded the credit of recognizing the condition of tracheal *oæna*, but the writer is not disposed to consider that it can ever occur as a primary affection (page 31). With regard to antitoxin in tracheal diphtheria, he advises an expectant attitude, and recommends tracheotomy rather than intuba-

tion, it being, of course, understood that this is not meant to apply to pure laryngeal diphtheria (page 38). Disease of the bronchial glands, as a cause of paralysis of the recurrent nerve, he considers, in contradiction to many writers, to be one of the most extremely infrequent occurrences (page 65), and very much rarer than gummatous or ulcerative processes in the trachea. A rare case of pyæmic cerebral abscess, resulting from the presence of a foreign body in a bronchus, is quoted from Sander (page 76). In cases of foreign bodies he strongly insists upon the danger of the administration of emetics (page 86), and formulates (pages 85 and 87) very intelligible general rules for adoption in cases in which the presence of a foreign body in the trachea or bronchi is suspected.

We cannot too strongly recommend the perusal of this work to all specialists in diseases of the air passages; and as we before said, there is a great deal which demands the earnest study of all teachers of practical medicine, because, although the book is hardly likely to be widely read by general practitioners, there is a great deal in it which it is necessary that they should know, and which might, very advisably, be incorporated in lectures on the respiratory organs. The bibliography of the subject is of an astonishing extent, and will be invaluable to anyone desirous of following up the subject if, indeed, there remains much more than Prof. Schrötter has done in this classical work.

Dundas Grant.

Ostmann, Prof. D.—*Gemeinverständliche Anweisung zur Heilung der Eiterung des Ohres.* ("Popular Instructions for the Curative Treatment of Suppuration in the Ear.") By Prof. D. OSTMANN, Director de K. Universitäts Poliklinik für Ohren, Nasen, und Halskranke zu Marburg. Leipzig: F. C. W. Vogel. 1896.

ALL those who have had any experience in the treatment of suppuration of the middle ear in poor or out-patient hospital practice, must have felt a keen disappointment at the frequency with which their best endeavours have been frustrated by the imperfect, and often deleterious, way in which their instructions for home treatment have been carried out. To mitigate this as much as possible, the author has drawn up in the clearest way the instructions necessary for the "other person" who is to carry out the cleansing, syringing, instillation of drops, and dressing at home, it being, of course, recognized at once that they cannot possibly be carried out by the patient himself. The instructions are drawn up in the form of full and explicit answers to the following questions: (1) How are the hands to be washed? (2) How is the outer ear, the auricle, to be purified? (3) How is the ear syringed out? (4) How is the ear washed out? (5) How is the ear dried out? (6) How is the ear closed after cleansing? (7) How is the syringing fluid prepared? (8) How are healing drops put into the ear? (9) How are ear forceps to be purified? (10) What other measures are of importance for the cure of a suppurating ear? These occupy nearly eight small pages of a short brochure, the reading of which cannot but suggest means of making clear to the lay assistant many apparently trivial points which are so self-evident to the aurist that he may feel it almost beneath his dignity to enlarge upon them, although much of his success in treatment may depend upon his doing so.

Dundas Grant.

Kelly, A. Brown.—*Mycosis Pharyngis Leptothricia and Keratosis Pharyngis.*

A. MacDougall, 68, Mitchell Street, Glasgow. 1896.

THESE are articles originally published in the "Glasgow Medical Journal," and are now issued in the form of a pamphlet, with an introduction in which the author states these papers are an additional proof of Siebermann's theory that the mycotic element is a secondary, and not a primary, condition; that keratosis is a better title than hyperkeratosis; and that a condition of mycosis does exist, but differs from that at present recognized as such. He describes, under the heading of course, the interesting fact that he has been able to verify the origin of the tufts, as described by Siebermann, of small white submucous spots, and also that if left to themselves they eventually disappear. And he also observes that whilst leptothrix is usually to be found in the lingual and faucial tufts, they are absent in the pharyngeal excrescences, thus proving conclusively its casual relation to the disease. A very admirable set of drawings from sections show the excessive horny growth of these tufts, and also one of the early stage.

As examples of true mycosis pharyngis leptothricia he quotes Semon's case and three of Michelson's, and others, in which a thick fur collects on the affected part and can be separated without bleeding, and which easily yields to local treatment. The author describes fully ten cases which have come under his own observation.

R. Lake.

Wilkens.—*Ueber die Bedeutung der Durchleuchtung für die Diagnose der Kieferhöhlenerkrankung.* ("The Value of Transillumination in the Diagnosis of Empyema of the Antrum Maxillare.") Thesis by JOHANNES ALBERTUS WILKENS.

THIS thesis is divided into six chapters, dealing with (1) History, (2) Technique, (3) Transillumination in Healthy People, (4) Cases in which it was used, (5) The Diagnostic Value of Transillumination, (6) Transillumination and Diagnostic Syringing. Then follow a short summary of the foregoing and a bibliography.

The author ascribes to Heryng the credit for being the first to recognize the real value of the method, and to point out that where empyema is present the lower eyelid remains dark, but is lighted up where the antrum is healthy. This symptom he therefore proposes to call Heryng's symptom. Similarly he proposes to call the illumination of the pupil the Vohsen-Davidsohn symptom; the subjective perception of light the Garel-Burger symptom; and the illumination of the lateral nasal wall and inferior turbinal the Robertson symptom. This may be very interesting from a historical point of view, but in practice is confusing.

In Chapter II. some details are given as to the kind of lamp and battery required. With a four-cell accumulator battery and an Urbantschitsch lamp Burger could illuminate the pupil in only fifty per cent. of his cases; whereas with a six-cell accumulator battery and a Hirschmann lamp Burger and the author could illuminate the pupil in seventy-four per cent. of their experiments. Much stress is laid on the necessity of having the room absolutely dark, of keeping the lamp under one's own control, and of alternately opening and closing the current. The last rule is of special importance in testing the subjective perception of light.

The author experimented on one hundred patients with presumably healthy antra, with the following results :—

Illumination of infra-orbital region !good in 54 per cent., moderate or poor in 37 per cent., absent in at most 9 per cent. Illumination of pupils, 74 per cent. (Note.—There were examined 54 women, 21 children, 25 men.) Subjective perception of light was present in almost all cases.

The illumination of the nasal wall and inferior turbinal is not considered of much use.

Chapter IV. consists of a short description of twenty-four acute and twenty-one chronic cases of empyema, regarded from the transillumination point of view. They prove the value of transillumination not only as a means of diagnosis, but also as an indication of the cure or the recurrence of the disease. The latter points, however, are more fully dealt with in the following chapters. There the author points out the fact that the darkness on the diseased side is caused not by the pus alone, but by the hyperæmia, infiltration, and thickening of the walls. Therefore, if for any reason there is no pus in the antrum at the time of examination, the diseased side still remains dark, and will not be lighted till up the disease is cured. Syringing, blowing through, or aspirating the cavity may give a negative result when first tried, and consequently have to be repeated before a conclusion is justified; and in some cases it is possible that by this process an antrum previously healthy may be infected. These proceedings, therefore, ought not to be resorted to except in cases where there are good grounds for suspecting the presence of empyema. On the other hand, transillumination can do no harm at all, and, if freely used, sometimes shows the presence of a quite unsuspected "latent" empyema.

The author, however, does not claim for transillumination absolute certainty, either positive or negative, but considers it a valuable aid to the diagnosis of empyema of the antrum. *Arthur J. Hutchison.*

NEW INSTRUMENTS, ETC.

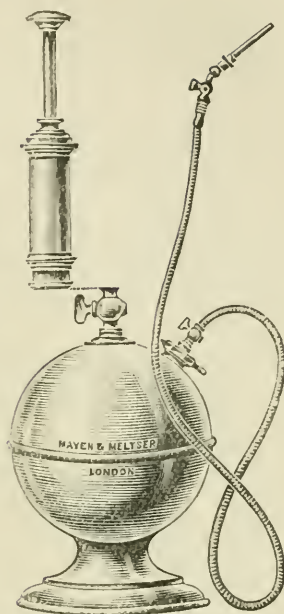
THE "SUN" POCKET STOVE. (D. Blair & Co., 4, Croydon Street, London, N.W.)

This little contrivance, which we have carefully tested for some time, fully answers its warranty; and we warmly recommend it to our readers. It is an elegant German silver ovoid case, into which is placed a lighted cylinder of patent fuel, which, in a very short time, heats the stove sufficiently to act as a delightful and efficient radiator; and one is not sorry to be able to suspend it by a safety pin and chain attached for the purpose. This little stove is not only a great personal comfort—to keep one's hands or back warm—but can have a respirator attached, so that warmed air can be inhaled; and the stove itself can be used for the local application of heat in neuralgia of any part of the body, or may supersede a mustard plaster to the throat or chest. The fuel is remarkably cheap: 2s. 6d. per hundred refills.

"WATER PRESSURE ACCUMULATOR"
CONTINUOUS SYRINGE.

(Meyer & Meltzer, 71, Great Portland Street, W.)

In our July issue it was stated that these accumulators, as they are called, were being adapted to our speciality. The figure shows the instrument complete. The reservoir holds about three pints of fluid, which is poured in by means of a funnel, the long tube being detached for the time. The air-pump is then screwed on at the top, as pointed out by the dotted line, and air is then pumped in until the resistance feels sufficient. The tube, which is a continuous armoured one, has at the distal end a control tap, which gives an exact control of the force of the stream, and a bayonet joint enables any form of nozzle to be used, the one depicted being an aural one. Tubes for irrigation of the nasal sinuses, Hartman's canula, etc., can all be used. If no fluid is put into the sphere it is converted into a compressed air apparatus. Sprays, nasal, etc., are supplied for use with it.



AN ANTISEPTIC INJECTOR. (Walter F. Chappell. "New York Med. Journ.," Sept. 26, 1896.)

This is an ingeniously contrived injector for the application of oleostearate of zinc to the nasal or other passages. The construction is such that the medicine employed cannot enter the rubber bulb which is attached to one end to expel it, being prevented from so doing by the formation of the glass bulb, which joins the stem in a manner somewhat similar to that employed in a safety ink bottle.

R. Lake.

ANABRUOSE PULMONAIRE. (Valdare, 63, Rue Pessac, Bordeaux.)

This is an ingenious little inhaler, formed like a cigar, with an artificial amber mouthpiece. The cigar is hollow, is filled with fine sawdust, saturated with an ethereal solution of benzoic, salicylic, and carbolic acids, menthol, and eucalyptol, and is meant to enable men to inhale the vapour without using a bulky and ugly respirator.

NEW PREPARATIONS, ETC.

CHINSOL. (B. Kühn, 36, St. Mary-at-Hill, London.)

A new antiseptic and disinfectant, in powder or tablets. It possesses a slight but pleasant aromatic scent; it is non-corrosive, non-toxic, and is possessed of remarkable germicidal properties. The development of staphylococcus pyogenes aureus is arrested by a solution of one in forty thousand. But perhaps its greatest value to

aurists and rhinologists lies in the fact that it does not coagulate albumen. As far as our experience goes, it appears an ideal antiseptic, and will occupy a first rank amongst the remedies used in our specialities.

(1) NASAL TABLETS; (2) EUTHYMOL; (3) TAKA-DIASTASE; (4) EXTRACT OF GOLDEN SEAL (colourless). (Parke, Davis, & Co., 21, North Audley Street, London; Detroit, New York, and Kansas City, U.S.A.)

(1) Nasal tablets. These handy tablets are another addition to the long list already in use, and will suit certain cases better than some of our older friends. They contain besides the four sodium salts—viz., bicarbonate, borate, benzoate, and salicylate—four vegetable antiseptics and deodorants: eucalyptol, thymol, menthol, and oil of wintergreen, and make an extremely pleasing and efficient solution.

(2) This is a highly potent and unirritating antiseptic compound; elegant both as to colour and smell, non-poisonous, and analgesic. Its uses are manifold, from soothing aphthous sores and removing the stench of ozæna to a mouth-wash or preventative of insect bites.

(3) Taka-diastrase. This ferment is formed of an aspergillus, and was discovered by Mr. Takamine and Prof. Atkinson, and is said—and, we think, rightly—to be the most potent diastatic agent yet known. It is put up in the tabloid form for internal use, and proves of great value in various digestive disturbances.

(4) Hydrastine deserves a more prominent place in nasal therapy in England than it has hitherto enjoyed, and the preparation under discussion is by far the best with which we are acquainted, as from it the disagreeable, bitter, and yellow-staining berberine has been removed. Its chief value is as tonic astringent, and is best used in a ten per cent. solution, and may often save nervous patients from the galvano-cautery at the same time that it improves the digestive organs by its stomachic properties.

Supplement

TO THE

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